SEQUENCE LISTING

<110> INCYTE PHARMACEUTICALS, INC.
HILLMAN, Jennifer L.
YUE, Henry
TANG, Y. Tom
LAL, Preeti
CORLEY, Neil C.
GUEGLER, Karl J.
BAUGHN, Mariah R.
AZIMZAI, Yalda
LU, Dyung Aina M.

<120> MEMBRANE TRANSPORT PROTEINS

<130> PF-0633 PCT

<140> To Be Assigned
<141> Herewith

<150> 09/186,778; unassigned; 09/200,277; unassigned; 09/221,405; unassigned; 60/121,896
<151> 1998-11-04; 1998-11-04; 1998-11-24; 1998-11-24; 1998-12-22; 1998-12-22; 1999-02-26

<160> 43

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<212> PRT
<213> Homo sapiens

<220>
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<223> Incyte ID No: 961344CD1

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| 1 | | | | | 5 | | | | 10 | | | | | | 15 |
| Ser | Ser | His | Leu | Val | Ser | Arg | Thr | Gln | Asp | Ile | His | Ile | Phe | Arg | |
| | | | | 20 | | | | | 25 | | | | | | 30 |
| Gln | Val | Thr | Ser | Arg | Gly | Glu | Ala | His | Leu | Glu | Leu | Asn | Ala | Phe | |
| | | | | 35 | | | | | 40 | | | | | | 45 |
| Arg | Arg | Lys | His | Asp | Cys | Ala | Leu | Val | Ile | Ser | Gly | Asp | Ser | Leu | |
| | | | | 50 | | | | | 55 | | | | | | 60 |
| Glu | Val | Cys | Leu | Lys | Tyr | Tyr | Glu | His | Glu | Phe | Val | Glu | Leu | Ala | |
| | | | | 65 | | | | | 70 | | | | | | 75 |
| Cys | Gln | Cys | Pro | Ala | Val | Val | Cys | Cys | Arg | Cys | Ser | Pro | Thr | Gln | |
| | | | | 80 | | | | | 85 | | | | | | 90 |
| Lys | Ala | Arg | Ile | Val | Thr | Leu | Leu | Gln | Gln | His | Thr | Gly | Arg | Arg | |
| | | | | 95 | | | | | 100 | | | | | | 105 |

```
Thr Cys Ala Ile Gly Asp Gly Gly Asn Asp Val Ser Met Ile Gln
                110                 115                 120
Ala Ala Asp Cys Gly Ile Gly Ile Glu Gly Lys Glu Gly Lys Gln
                125                 130                 135
Ala Ser Leu Ala Ala Asp Phe Ser Ile Thr Gln Phe Arg His Ile
                140                 145                 150
Gly Arg Leu Leu Met Val His Gly Arg Asn Ser Tyr Lys Arg Ser
                155                 160                 165
Ala Ala Leu Gly Gln Phe Val Met His Arg Gly Leu Ile Ile Ser
                170                 175                 180
Thr Met Gln Ala Val Phe Ser Ser Val Phe Tyr Phe Ala Ser Val
                185                 190                 195
Pro Leu Tyr Gln Gly Phe Leu Met Val Gly Tyr Ala Thr Ile Tyr
                200                 205                 210
Thr Met Phe Pro Val Phe Ser Leu Val Leu Asp Gln Asp Val Lys
                215                 220                 225
Pro Glu Met Ala Met Leu Tyr Pro Glu Leu Tyr Lys Asp Leu Thr
                230                 235                 240
Lys Gly Arg Ser Leu Ser Phe Lys Thr Phe Leu Ile Trp Val Leu
                245                 250                 255
Ile Ser Ile Tyr Gln Gly Gly Ile Leu Met Tyr Gly Ala Leu Val
                260                 265                 270
Leu Phe Glu Ser Glu Phe Val His Val Val Ala Ile Ser Phe Thr
                275                 280                 285
Ala Leu Ile Leu Thr Glu Leu Leu Met Val Ala Leu Thr Val Arg
                290                 295                 300
Thr Trp His Trp Leu Met Val Val Ala Glu Phe Leu Ser Leu Gly
                305                 310                 315
Cys Tyr Val Ser Ser Leu Ala Phe Leu Asn Glu Tyr Phe Gly Ile
                320                 325                 330
Gly Arg Val Ser Phe Gly Ala Phe Leu Asp Val Ala Phe Ile Thr
                335                 340                 345
Thr Val Thr Phe Leu Trp Lys Val Ser Ala Ile Thr Val Val Ser
                350                 355                 360
Cys Leu Pro Leu Tyr Val Leu Lys Tyr Leu Arg Arg Lys Leu Ser
                365                 370                 375
Pro Pro Ser Tyr Cys Lys Leu Ala Ser
                380
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<210> 2
<211> 846
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 3128782CD1

<400> 2

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  1               5                  10                  15
Gly Asp Gly Glu Ser Thr Ser Pro Ser Asp Lys Val Val Lys Lys
                20                  25                  30
Gly Lys Lys Asp Lys Lys Ile Lys Lys Thr Phe Phe Glu Glu Leu
```

```
                35                  40                  45
Ala Val Glu Asp Lys Gln Ala Gly Glu Glu Glu Lys Val Leu Lys
            50                  55                  60
Glu Lys Glu Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Lys
        65                  70                  75
Lys Lys Arg Asp Thr Arg Lys Gly Arg Arg Lys Lys Asp Val Asp
    80                  85                  90
Asp Asp Gly Glu Glu Lys Glu Leu Met Glu Arg Leu Lys Lys Leu
                95                  100                 105
Ser Val Pro Thr Ser Asp Glu Glu Asp Glu Val Pro Ala Pro Lys
            110                 115                 120
Pro Arg Gly Gly Lys Lys Thr Lys Gly Gly Asn Val Phe Ala Ala
        125                 130                 135
Leu Ile Gln Asp Gln Ser Glu Glu Glu Glu Glu Glu Glu Lys His
    140                 145                 150
Pro Pro Lys Pro Ala Lys Pro Glu Lys Asn Arg Ile Asn Lys Ala
155                 160                 165
Val Ser Glu Glu Gln Gln Pro Ala Leu Lys Gly Lys Lys Gly Lys
            170                 175                 180
Glu Glu Lys Ser Lys Gly Lys Ala Lys Pro Gln Asn Lys Phe Ala
        185                 190                 195
Ala Leu Asp Asn Glu Glu Glu Asp Lys Glu Glu Glu Ile Ile Lys
    200                 205                 210
Glu Lys Glu Pro Pro Lys Gln Gly Lys Glu Lys Ala Lys Lys Ala
215                 220                 225
Glu Gln Gly Ser Glu Glu Glu Gly Glu Gly Glu Glu Glu Glu Glu
            230                 235                 240
Glu Gly Gly Glu Ser Lys Ala Asp Asp Pro Tyr Ala His Leu Ser
        245                 250                 255
Lys Lys Glu Lys Lys Lys Leu Lys Lys Gln Met Glu Tyr Glu Arg
    260                 265                 270
Gln Val Ala Ser Leu Lys Ala Ala Asn Ala Ala Glu Asn Asp Phe
275                 280                 285
Ser Val Ser Gln Ala Glu Met Ser Ser Arg Gln Ala Met Leu Glu
            290                 295                 300
Asn Ala Ser Asp Ile Lys Leu Glu Lys Phe Ser Ile Ser Ala His
        305                 310                 315
Gly Lys Glu Leu Phe Val Asn Ala Asp Leu Tyr Ile Val Ala Gly
    320                 325                 330
Arg Arg Tyr Gly Leu Val Gly Pro Asn Gly Lys Gly Lys Thr Thr
335                 340                 345
Leu Leu Lys His Ile Ala Asn Arg Ala Leu Ser Ile Pro Pro Asn
            350                 355                 360
Ile Asp Val Leu Leu Cys Glu Gln Glu Val Val Ala Asp Glu Thr
        365                 370                 375
Pro Ala Val Gln Ala Val Leu Arg Ala Asp Thr Lys Arg Leu Lys
    380                 385                 390
Leu Leu Glu Glu Glu Arg Arg Leu Gln Gly Gln Leu Glu Gln Gly
395                 400                 405
Asp Asp Thr Ala Ala Glu Arg Leu Glu Lys Val Tyr Glu Glu Leu
            410                 415                 420
Arg Ala Thr Gly Ala Ala Ala Ala Glu Ala Lys Ala Arg Arg Ile
        425                 430                 435
Leu Ala Gly Leu Gly Phe Asp Pro Glu Met Gln Asn Arg Pro Thr
    440                 445                 450
```

```
Gln Lys Phe Ser Gly Gly Trp Arg Met Arg Val Ser Leu Ala Arg
                455                 460                 465
Ala Leu Phe Met Glu Pro Thr Leu Leu Met Leu Asp Glu Pro Thr
                470                 475                 480
Asn His Leu Asp Leu Asn Ala Val Ile Trp Leu Asn Asn Tyr Leu
                485                 490                 495
Gln Gly Trp Arg Lys Thr Leu Leu Ile Val Ser His Asp Gln Gly
                500                 505                 510
Phe Leu Asp Asp Val Cys Thr Asp Ile Ile His Leu Asp Ala Gln
                515                 520                 525
Arg Leu His Tyr Tyr Arg Gly Asn Tyr Met Thr Phe Lys Lys Met
                530                 535                 540
Tyr Gln Gln Lys Gln Lys Glu Leu Leu Lys Gln Tyr Glu Lys Gln
                545                 550                 555
Glu Lys Lys Leu Lys Glu Leu Lys Ala Gly Gly Lys Ser Thr Lys
                560                 565                 570
Gln Ala Glu Lys Gln Thr Lys Glu Ala Leu Thr Arg Lys Gln Gln
                575                 580                 585
Lys Cys Arg Arg Lys Asn Gln Asp Glu Glu Ser Gln Glu Ala Pro
                590                 595                 600
Glu Leu Leu Lys Arg Pro Lys Glu Tyr Thr Val Arg Phe Thr Phe
                605                 610                 615
Pro Asp Pro Pro Pro Leu Ser Pro Pro Val Leu Gly Leu His Gly
                620                 625                 630
Val Thr Phe Gly Tyr Gln Gly Gln Lys Pro Leu Phe Lys Asn Leu
                635                 640                 645
Asp Phe Gly Ile Asp Met Asp Ser Arg Ile Cys Ile Val Gly Pro
                650                 655                 660
Asn Gly Val Gly Lys Ser Thr Leu Leu Leu Leu Leu Thr Gly Lys
                665                 670                 675
Leu Thr Pro Thr His Gly Glu Met Arg Lys Asn His Arg Leu Lys
                680                 685                 690
Ile Gly Phe Phe Asn Gln Gln Tyr Ala Glu Gln Leu Arg Met Glu
                695                 700                 705
Glu Thr Pro Thr Glu Tyr Leu Gln Arg Gly Phe Asn Leu Pro Tyr
                710                 715                 720
Gln Asp Ala Arg Lys Cys Leu Gly Arg Phe Gly Leu Glu Ser His
                725                 730                 735
Ala His Thr Ile Gln Ile Cys Lys Leu Ser Gly Gly Gln Lys Ala
                740                 745                 750
Arg Val Val Phe Ala Glu Leu Ala Cys Arg Glu Pro Asp Val Leu
                755                 760                 765
Ile Leu Asp Glu Pro Thr Asn Asn Leu Asp Ile Glu Ser Ile Asp
                770                 775                 780
Ala Leu Gly Glu Ala Ile Asn Glu Tyr Lys Gly Ala Val Ile Val
                785                 790                 795
Val Ser His Asp Ala Arg Leu Ile Thr Glu Thr Asn Cys Gln Leu
                800                 805                 810
Trp Val Val Glu Glu Gln Ser Val Ser Gln Ile Asp Gly Asp Phe
                815                 820                 825
Glu Asp Tyr Lys Arg Glu Val Leu Glu Ala Leu Gly Glu Val Met
                830                 835                 840
Val Ser Arg Pro Arg Glu
                845
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<210> 3
<211> 511
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 1720440CD1

<400> 3

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Lys Leu Gly Val Glu Ala Ala Leu Ile Asn Thr Asn Leu Arg Arg
             20                  25                  30
Asp Ala Leu Leu His Cys Leu Thr Thr Ser Arg Ala Arg Ala Leu
             35                  40                  45
Val Phe Gly Ser Glu Met Ala Ser Ala Ile Cys Glu Val His Ala
             50                  55                  60
Ser Leu Asp Pro Ser Leu Ser Leu Phe Cys Ser Gly Ser Trp Glu
             65                  70                  75
Pro Gly Ala Val Pro Pro Ser Thr Glu His Leu Asp Pro Leu Leu
             80                  85                  90
Lys Asp Ala Pro Lys His Leu Pro Ser Cys Pro Asp Lys Gly Phe
             95                 100                 105
Thr Asp Lys Leu Phe Tyr Ile Tyr Thr Ser Gly Thr Thr Gly Leu
            110                 115                 120
Pro Lys Ala Ala Ile Val Val His Ser Arg Tyr Tyr Arg Met Ala
            125                 130                 135
Ala Leu Val Tyr Tyr Gly Phe Arg Met Arg Pro Asn Asp Ile Val
            140                 145                 150
Tyr Asp Cys Leu Pro Leu Tyr His Ser Ala Gly Asn Ile Val Gly
            155                 160                 165
Ile Gly Gln Cys Leu Leu His Gly Met Thr Val Val Ile Arg Lys
            170                 175                 180
Lys Phe Ser Ala Ser Arg Phe Trp Asp Asp Cys Ile Lys Tyr Asn
            185                 190                 195
Cys Thr Ile Val Gln Tyr Ile Gly Glu Leu Cys Arg Tyr Leu Leu
            200                 205                 210
Asn Gln Pro Pro Arg Glu Ala Glu Asn Gln His Gln Val Arg Met
            215                 220                 225
Ala Leu Gly Asn Gly Leu Arg Gln Ser Ile Trp Thr Asn Phe Ser
            230                 235                 240
Ser Arg Phe His Ile Pro Gln Val Ala Glu Phe Tyr Gly Ala Thr
            245                 250                 255
Glu Cys Asn Cys Ser Leu Gly Asn Phe Asp Ser Gln Val Gly Ala
            260                 265                 270
Cys Gly Phe Asn Ser Arg Ile Leu Ser Ser Val Tyr Pro Ile Arg
            275                 280                 285
Leu Val Arg Val Asn Glu Asp Thr Met Glu Leu Ile Arg Gly Pro
            290                 295                 300
Asp Gly Val Cys Ile Pro Cys Gln Pro Gly Glu Pro Gly Gln Leu
            305                 310                 315
Val Gly Arg Ile Ile Gln Lys Asp Pro Leu Arg Arg Phe Asp Gly
            320                 325                 330
Tyr Leu Asn Gln Gly Ala Asn Asn Lys Lys Ile Ala Lys Asp Val
```

335 340 345
Phe Lys Lys Gly Asp Gln Ala Tyr Leu Thr Gly Asp Val Leu Val
350 355 360
Met Asp Glu Leu Gly Tyr Leu Tyr Phe Arg Asp Arg Thr Gly Asp
365 370 375
Thr Phe Arg Trp Lys Gly Glu Asn Val Ser Thr Thr Glu Val Glu
380 385 390
Gly Thr Leu Ser Arg Leu Leu Asp Met Ala Asp Val Ala Val Tyr
395 400 405
Gly Val Glu Val Pro Gly Thr Glu Gly Arg Ala Gly Met Ala Ala
410 415 420
Val Ala Ser Pro Thr Gly Asn Cys Asp Leu Glu Arg Phe Ala Gln
425 430 435
Val Leu Glu Lys Glu Leu Pro Leu Tyr Ala Arg Pro Ile Phe Leu
440 445 450
Arg Leu Leu Pro Glu Leu His Lys Thr Gly Thr Tyr Lys Phe Gln
455 460 465
Lys Thr Glu Leu Arg Lys Glu Gly Phe Asp Pro Ala Ile Val Lys
470 475 480
Asp Pro Leu Phe Tyr Leu Asp Ala Gln Lys Gly Arg Tyr Val Pro
485 490 495
Leu Asp Gln Glu Ala Tyr Ser Arg Ile Gln Ala Gly Glu Glu Lys
500 505 510
Leu

<210> 4
<211> 718
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 2274290CD1

<400> 4
Met Leu Val His Leu Phe Arg Val Gly Ile Arg Gly Gly Pro Phe
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Pro Gly Arg Leu Leu Pro Pro Leu Arg Phe Gln Thr Phe Ser Ala
20 25 30
Val Arg Tyr Ser Asp Gly Tyr Arg Ser Ser Ser Leu Leu Arg Ala
35 40 45
Val Ala His Leu Arg Ser Gln Leu Trp Ala His Leu Pro Arg Ala
50 55 60
Pro Leu Ala Pro Arg Trp Ser Pro Ser Ala Trp Cys Trp Val Gly
65 70 75
Gly Ala Leu Leu Gly Pro Met Val Leu Ser Lys His Pro His Leu
80 85 90
Cys Leu Val Ala Leu Cys Glu Ala Glu Glu Ala Pro Pro Ala Ser
95 100 105
Ser Thr Pro His Val Val Gly Ser Arg Phe Asn Trp Lys Leu Phe
110 115 120
Trp Gln Phe Leu His Pro His Leu Leu Val Leu Gly Val Ala Val
125 130 135
Val Leu Ala Leu Gly Ala Ala Leu Val Asn Val Gln Ile Pro Leu

```
                140                 145                 150
Leu Leu Gly Gln Leu Val Glu Val Val Ala Lys Tyr Thr Arg Asp
            155                 160                 165
His Val Gly Ser Phe Met Thr Glu Ser Gln Asn Leu Ser Thr His
            170                 175                 180
Leu Leu Ile Leu Tyr Gly Val Gln Gly Leu Leu Thr Phe Gly Tyr
            185                 190                 195
Leu Val Leu Leu Ser His Val Gly Glu Arg Met Ala Val Asp Met
            200                 205                 210
Arg Arg Ala Leu Phe Ser Ser Leu Leu Arg Gln Asp Ile Thr Phe
            215                 220                 225
Phe Asp Ala Asn Lys Thr Gly Gln Leu Val Ser Arg Leu Thr Thr
            230                 235                 240
Asp Val Gln Glu Phe Lys Ser Ser Phe Lys Leu Val Ile Ser Gln
            245                 250                 255
Gly Leu Arg Ser Cys Thr Gln Val Ala Gly Cys Leu Val Ser Leu
            260                 265                 270
Ser Met Leu Ser Thr Arg Leu Thr Leu Leu Leu Met Val Ala Thr
            275                 280                 285
Pro Ala Leu Met Gly Val Gly Thr Leu Met Gly Ser Gly Leu Arg
            290                 295                 300
Lys Leu Ser Arg Gln Cys Gln Glu Gln Ile Ala Arg Ala Met Gly
            305                 310                 315
Val Ala Asp Glu Ala Leu Gly Asn Val Arg Thr Val Arg Ala Phe
            320                 325                 330
Ala Met Glu Gln Arg Glu Glu Glu Arg Tyr Gly Ala Glu Leu Glu
            335                 340                 345
Ala Cys Arg Cys Arg Ala Glu Glu Leu Gly Arg Gly Ile Ala Leu
            350                 355                 360
Phe Gln Gly Leu Ser Asn Ile Ala Phe Asn Cys Met Val Leu Gly
            365                 370                 375
Thr Leu Phe Ile Gly Gly Ser Leu Val Ala Gly Gln Gln Leu Thr
            380                 385                 390
Gly Gly Asp Leu Met Ser Phe Leu Val Ala Ser Gln Thr Val Gln
            395                 400                 405
Arg Ser Met Ala Asn Leu Ser Val Leu Phe Gly Gln Val Val Arg
            410                 415                 420
Gly Leu Ser Ala Gly Ala Arg Val Phe Glu Tyr Met Ala Leu Asn
            425                 430                 435
Pro Cys Ile Pro Leu Ser Gly Gly Cys Cys Val Pro Lys Glu Gln
            440                 445                 450
Leu Arg Gly Ser Val Thr Phe Gln Asn Val Cys Phe Ser Tyr Pro
            455                 460                 465
Cys Arg Pro Gly Phe Glu Val Leu Lys Asp Phe Thr Leu Thr Leu
            470                 475                 480
Pro Pro Gly Lys Ile Val Ala Leu Val Gly Gln Ser Gly Gly Gly
            485                 490                 495
Lys Thr Thr Val Ala Ser Leu Leu Glu Arg Phe Tyr Asp Pro Thr
            500                 505                 510
Ala Gly Val Val Met Leu Asp Gly Arg Asp Leu Arg Thr Leu Asp
            515                 520                 525
Pro Ser Trp Leu Arg Gly Gln Val Val Gly Phe Ile Ser Gln Glu
            530                 535                 540
Pro Val Leu Phe Gly Thr Thr Ile Met Glu Asn Ile Arg Phe Gly
            545                 550                 555
```

```
Lys Leu Glu Ala Ser Asp Glu Glu Val Tyr Thr Ala Ala Arg Glu
                560                 565                 570
Ala Asn Ala His Glu Phe Ile Thr Ser Phe Pro Glu Gly Tyr Asn
                575                 580                 585
Thr Val Val Gly Glu Arg Gly Thr Thr Leu Ser Gly Gly Gln Lys
                590                 595                 600
Gln Arg Leu Ala Ile Ala Arg Ala Leu Ile Lys Gln Pro Thr Val
                605                 610                 615
Leu Ile Leu Asp Glu Ala Thr Ser Ala Leu Asp Ala Glu Ser Glu
                620                 625                 630
Arg Val Val Gln Glu Ala Leu Asp Arg Ala Ser Ala Gly Arg Thr
                635                 640                 645
Val Leu Val Ile Ala His Arg Leu Ser Thr Val Arg Gly Ala His
                650                 655                 660
Cys Ile Val Val Met Ala Asp Gly Arg Val Trp Glu Ala Gly Thr
                665                 670                 675
His Glu Glu Leu Leu Lys Lys Gly Gly Leu Tyr Ala Glu Leu Ile
                680                 685                 690
Arg Arg Gln Ala Leu Asp Ala Pro Arg Thr Ala Ala Pro Pro Pro
                695                 700                 705
Lys Lys Pro Glu Gly Pro Arg Ser His Gln His Lys Ser
                710                 715
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<210> 5
<211> 635
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 2740029CD1

<400> 5

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Gly Thr Ser Val Gly Met Ser Thr Phe Ser Ile Met Asp Tyr Val
                20                  25                  30
Val Phe Val Leu Leu Leu Val Leu Ser Leu Ala Ile Gly Leu Tyr
                35                  40                  45
His Ala Cys Arg Gly Trp Gly Arg His Thr Val Gly Glu Leu Leu
                50                  55                  60
Met Ala Asp Arg Lys Met Gly Cys Leu Pro Val Ala Leu Ser Leu
                65                  70                  75
Leu Ala Thr Phe Gln Ser Ala Val Ala Ile Leu Gly Val Pro Ser
                80                  85                  90
Glu Ile Tyr Arg Phe Gly Thr Gln Tyr Trp Phe Leu Gly Cys Cys
                95                 100                 105
Tyr Phe Leu Gly Leu Leu Ile Pro Ala His Ile Phe Ile Pro Val
               110                 115                 120
Phe Tyr Arg Leu His Leu Thr Ser Ala Tyr Glu Tyr Leu Glu Leu
               125                 130                 135
Arg Phe Asn Lys Thr Val Arg Val Cys Gly Thr Val Thr Phe Ile
               140                 145                 150
Phe Gln Met Val Ile Tyr Met Gly Val Val Leu Tyr Ala Pro Ser
```

```
                155                 160                 165
Leu Ala Leu Asn Ala Val Thr Gly Phe Asp Leu Trp Leu Ser Val
                170                 175                 180
Leu Ala Leu Gly Ile Val Cys Thr Val Tyr Thr Ala Leu Gly Gly
                185                 190                 195
Leu Lys Ala Val Ile Trp Thr Asp Val Phe Gln Thr Leu Val Met
                200                 205                 210
Phe Leu Gly Gln Leu Ala Val Ile Ile Val Gly Ser Ala Lys Val
                215                 220                 225
Gly Gly Leu Gly Arg Val Trp Ala Val Ala Ser Gln His Gly Arg
                230                 235                 240
Ile Ser Gly Phe Glu Leu Asp Pro Asp Pro Phe Val Arg His Thr
                245                 250                 255
Phe Trp Thr Leu Ala Phe Gly Gly Val Phe Met Met Leu Ser Leu
                260                 265                 270
Tyr Gly Val Asn Gln Ala Gln Val Gln Arg Tyr Leu Ser Ser Arg
                275                 280                 285
Thr Glu Lys Ala Ala Val Leu Ser Cys Tyr Ala Val Phe Pro Phe
                290                 295                 300
Gln Gln Val Ser Leu Cys Val Gly Cys Leu Ile Gly Leu Val Met
                305                 310                 315
Phe Ala Tyr Tyr Gln Glu Tyr Pro Met Ser Ile Gln Gln Ala Gln
                320                 325                 330
Ala Ala Pro Asp Gln Phe Val Leu Tyr Phe Val Met Asp Leu Leu
                335                 340                 345
Lys Gly Leu Pro Gly Leu Pro Gly Leu Phe Ile Ala Cys Leu Phe
                350                 355                 360
Ser Gly Ser Leu Ser Thr Ile Ser Ser Ala Phe Asn Ser Leu Ala
                365                 370                 375
Thr Val Thr Met Glu Asp Leu Ile Arg Pro Trp Phe Pro Glu Phe
                380                 385                 390
Ser Glu Ala Arg Ala Ile Met Leu Ser Arg Gly Leu Ala Phe Gly
                395                 400                 405
Tyr Gly Leu Leu Cys Leu Gly Met Ala Tyr Ile Ser Ser Gln Met
                410                 415                 420
Gly Pro Val Leu Gln Ala Ala Ile Ser Ile Phe Gly Met Val Gly
                425                 430                 435
Gly Pro Leu Leu Gly Leu Phe Cys Leu Gly Met Phe Phe Pro Cys
                440                 445                 450
Ala Asn Pro Pro Gly Ala Val Val Gly Leu Leu Ala Gly Leu Val
                455                 460                 465
Met Ala Phe Trp Ile Gly Ile Gly Ser Ile Val Thr Ser Met Gly
                470                 475                 480
Ser Ser Met Pro Pro Ser Pro Ser Asn Gly Ser Ser Phe Ser Leu
                485                 490                 495
Pro Thr Asn Leu Thr Val Ala Thr Val Thr Thr Leu Met Pro Leu
                500                 505                 510
Thr Thr Phe Ser Lys Pro Thr Gly Leu Gln Arg Phe Tyr Ser Leu
                515                 520                 525
Ser Tyr Leu Trp Tyr Ser Ala His Asn Ser Thr Thr Val Ile Val
                530                 535                 540
Val Gly Leu Ile Val Ser Leu Leu Thr Gly Arg Met Arg Gly Arg
                545                 550                 555
Ser Leu Asn Pro Ala Thr Ile Tyr Pro Val Leu Pro Lys Leu Leu
                560                 565                 570
```

```
Ser Leu Leu Pro Leu Ser Cys Gln Lys Arg Leu His Cys Arg Ser
                575                 580                 585
Tyr Gly Gln Asp His Leu Asp Thr Gly Leu Phe Pro Glu Lys Pro
                590                 595                 600
Arg Asn Gly Val Leu Gly Asp Ser Arg Asp Lys Glu Ala Met Ala
                605                 610                 615
Leu Asp Gly Thr Ala Tyr Gln Gly Ser Ser Ser Thr Cys Ile Leu
                620                 625                 630
Gln Glu Thr Ser Leu
                635
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<210> 6
<211> 535
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 2414415CD1

<400> 6

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Pro Gly Gly Gly Glu Ser Asp Ala Ser Pro Glu Ala Gly Ser Gly
                 20                  25                  30
Gly Gly Gly Val Ala Leu Lys Lys Glu Ile Gly Leu Val Ser Ala
                 35                  40                  45
Cys Gly Ile Ile Val Gly Asn Ile Ile Gly Ser Gly Ile Phe Val
                 50                  55                  60
Ser Pro Lys Gly Val Leu Glu Asn Ala Gly Ser Val Gly Leu Ala
                 65                  70                  75
Leu Ile Val Trp Ile Val Thr Gly Phe Ile Thr Val Val Gly Ala
                 80                  85                  90
Leu Cys Tyr Ala Glu Leu Gly Val Thr Ile Pro Lys Ser Gly Gly
                 95                 100                 105
Asp Tyr Ser Tyr Val Lys Asp Ile Phe Gly Gly Leu Ala Gly Phe
                110                 115                 120
Leu Arg Leu Trp Ile Ala Val Leu Val Ile Tyr Pro Thr Asn Gln
                125                 130                 135
Ala Val Ile Ala Leu Thr Phe Ser Asn Tyr Val Leu Gln Pro Leu
                140                 145                 150
Phe Pro Thr Cys Phe Pro Pro Glu Ser Gly Leu Arg Leu Leu Ala
                155                 160                 165
Ala Ile Cys Leu Leu Leu Leu Thr Trp Val Asn Cys Ser Ser Val
                170                 175                 180
Arg Trp Ala Thr Arg Val Gln Asp Ile Phe Thr Ala Gly Lys Leu
                185                 190                 195
Leu Ala Leu Ala Leu Ile Ile Ile Met Gly Ile Val Gln Ile Cys
                200                 205                 210
Lys Gly Glu Tyr Phe Trp Leu Glu Pro Lys Asn Ala Phe Glu Asn
                215                 220                 225
Phe Gln Glu Pro Asp Ile Gly Leu Val Ala Leu Ala Phe Leu Gln
                230                 235                 240
Gly Ser Phe Ala Tyr Gly Gly Trp Asn Phe Leu Asn Tyr Val Thr
```

```
                245                 250                 255
Glu Glu Leu Val Asp Pro Tyr Lys Asn Leu Pro Arg Ala Ile Phe
                260                 265                 270
Ile Ser Ile Pro Leu Val Thr Phe Val Tyr Val Phe Ala Asn Val
                275                 280                 285
Ala Tyr Val Thr Ala Met Ser Pro Gln Glu Leu Leu Ala Ser Asn
                290                 295                 300
Ala Val Ala Val Thr Phe Gly Glu Lys Leu Leu Gly Val Met Ala
                305                 310                 315
Trp Ile Met Pro Ile Ser Val Ala Leu Ser Thr Phe Gly Gly Val
                320                 325                 330
Asn Gly Ser Leu Phe Thr Ser Ser Arg Leu Phe Phe Ala Gly Ala
                335                 340                 345
Arg Glu Gly His Leu Pro Ser Val Leu Ala Met Ile His Val Lys
                350                 355                 360
Arg Cys Thr Pro Ile Pro Ala Leu Leu Phe Thr Cys Ile Ser Thr
                365                 370                 375
Leu Leu Met Leu Val Thr Ser Asp Met Tyr Thr Leu Ile Asn Tyr
                380                 385                 390
Val Gly Phe Ile Asn Tyr Leu Phe Tyr Gly Val Thr Val Ala Gly
                395                 400                 405
Gln Ile Val Leu Arg Trp Lys Lys Pro Asp Ile Pro Arg Pro Ile
                410                 415                 420
Lys Ile Asn Leu Leu Phe Pro Ile Ile Tyr Leu Leu Phe Trp Ala
                425                 430                 435
Phe Leu Leu Val Phe Ser Leu Trp Ser Glu Pro Val Val Cys Gly
                440                 445                 450
Ile Gly Leu Ala Ile Met Leu Thr Gly Val Pro Val Tyr Phe Leu
                455                 460                 465
Gly Val Tyr Trp Gln His Lys Pro Lys Cys Phe Ser Asp Phe Ile
                470                 475                 480
Glu Leu Leu Thr Leu Val Ser Gln Lys Met Cys Val Val Val Tyr
                485                 490                 495
Pro Glu Val Glu Arg Gly Ser Gly Thr Glu Glu Ala Asn Glu Asp
                500                 505                 510
Met Glu Glu Gln Gln Gln Pro Met Tyr Gln Pro Thr Pro Thr Lys
                515                 520                 525
Asp Lys Asp Val Ala Gly Gln Pro Gln Pro
                530                 535
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<210> 7
<211> 456
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 2466714CD1

<400> 7

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Met Glu Ala Ser Trp Gly Ser Phe Asn Ala Glu Arg Gly Trp Tyr
  1               5                  10                  15
Val Ser Val Gln Gln Pro Glu Glu Ala Glu Ala Glu Glu Leu Ser
                 20                  25                  30
```

```
Pro Leu Leu Ser Asn Glu Leu His Arg Gln Arg Ser Pro Gly Val
                35                  40                  45
Ser Phe Gly Leu Ser Val Phe Asn Leu Met Asn Ala Ile Met Gly
                50                  55                  60
Ser Gly Ile Leu Gly Leu Ala Tyr Val Met Ala Asn Thr Gly Val
                65                  70                  75
Phe Gly Phe Ser Phe Leu Leu Leu Thr Val Ala Leu Leu Ala Ser
                80                  85                  90
Tyr Ser Val His Leu Leu Leu Ser Met Cys Ile Gln Thr Ala Val
                95                 100                 105
Thr Ser Tyr Glu Asp Leu Gly Leu Phe Ala Phe Gly Leu Pro Gly
               110                 115                 120
Lys Leu Val Val Ala Gly Thr Ile Ile Ile Gln Asn Ile Gly Ala
               125                 130                 135
Met Ser Ser Tyr Leu Leu Ile Ile Lys Thr Glu Leu Pro Ala Ala
               140                 145                 150
Ile Ala Glu Phe Leu Thr Gly Asp Tyr Asn Arg Tyr Trp Tyr Leu
               155                 160                 165
Asp Gly Gln Thr Leu Leu Ile Ile Ile Cys Val Gly Ile Val Phe
               170                 175                 180
Pro Leu Ala Leu Leu Pro Lys Ile Gly Phe Leu Gly Tyr Thr Ser
               185                 190                 195
Ser Leu Ser Phe Phe Phe Met Met Phe Phe Ala Leu Val Val Ile
               200                 205                 210
Ile Lys Lys Trp Ser Ile Pro Cys Pro Leu Thr Leu Asn Tyr Val
               215                 220                 225
Glu Lys Gly Phe Gln Ile Ser Asn Val Thr Asp Asp Cys Lys Pro
               230                 235                 240
Lys Leu Phe His Phe Ser Lys Glu Ser Ala Tyr Ala Leu Pro Thr
               245                 250                 255
Met Ala Phe Ser Phe Leu Cys His Thr Ser Ile Leu Pro Ile Tyr
               260                 265                 270
Cys Glu Leu Gln Ser Pro Ser Lys Lys Arg Met Gln Asn Val Thr
               275                 280                 285
Asn Thr Ala Ile Ala Leu Ser Phe Leu Ile Tyr Phe Ile Ser Ala
               290                 295                 300
Leu Phe Gly Tyr Leu Thr Phe Tyr Asp Lys Val Glu Ser Glu Leu
               305                 310                 315
Leu Lys Gly Tyr Ser Lys Tyr Leu Ser His Asp Val Val Val Met
               320                 325                 330
Thr Val Lys Leu Cys Ile Leu Phe Ala Val Leu Leu Thr Val Pro
               335                 340                 345
Leu Ile His Phe Pro Ala Arg Lys Ala Val Thr Met Met Phe Phe
               350                 355                 360
Ser Asn Phe Pro Phe Ser Trp Ile Arg His Phe Leu Ile Thr Leu
               365                 370                 375
Ala Leu Asn Ile Ile Ile Val Leu Leu Ala Ile Tyr Val Pro Asp
               380                 385                 390
Ile Arg Asn Val Phe Gly Val Val Gly Ala Ser Thr Ser Thr Cys
               395                 400                 405
Leu Ile Phe Ile Phe Pro Gly Leu Phe Tyr Leu Lys Leu Ser Arg
               410                 415                 420
Glu Asp Phe Leu Ser Trp Lys Lys Leu Gly Ala Phe Val Leu Leu
               425                 430                 435
Ile Phe Gly Ile Leu Val Gly Asn Phe Ser Leu Ala Leu Ile Ile
```

```
                440                 445                 450
Phe Asp Trp Ile Asn Lys
                455
```

<210> 8
<211> 325
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 2617942CD1

<400> 8

```
Met Phe Ala Asn Leu Lys Tyr Val Ser Leu Gly Ile Leu Val Phe
  1               5                  10                  15
Gln Thr Thr Ser Leu Val Leu Thr Met Arg Tyr Ser Arg Thr Leu
                20                  25                  30
Lys Glu Glu Gly Pro Arg Tyr Leu Ser Ser Thr Ala Val Val Val
                35                  40                  45
Ala Glu Leu Leu Lys Ile Met Ala Cys Ile Leu Leu Val Tyr Lys
                50                  55                  60
Asp Ser Lys Cys Ser Leu Arg Ala Leu Asn Arg Val Leu His Asp
                65                  70                  75
Glu Ile Leu Asn Lys Pro Met Glu Thr Leu Lys Leu Ala Ile Pro
                80                  85                  90
Ser Gly Ile Tyr Thr Leu Gln Asn Asn Leu Leu Tyr Val Ala Leu
                95                 100                 105
Ser Asn Leu Asp Ala Ala Thr Tyr Gln Val Thr Tyr Gln Leu Lys
               110                 115                 120
Ile Leu Thr Thr Ala Leu Phe Ser Val Ser Met Leu Ser Lys Lys
               125                 130                 135
Leu Gly Val Tyr Gln Trp Leu Ser Leu Val Ile Leu Met Thr Gly
               140                 145                 150
Val Ala Phe Val Gln Trp Pro Ser Asp Ser Gln Leu Asp Ser Lys
               155                 160                 165
Glu Leu Ser Ala Gly Ser Gln Phe Val Gly Leu Met Ala Val Leu
               170                 175                 180
Thr Ala Cys Phe Ser Ser Gly Phe Ala Gly Val Tyr Phe Glu Lys
               185                 190                 195
Ile Leu Lys Glu Thr Lys Gln Ser Val Trp Ile Arg Asn Ile Gln
               200                 205                 210
Leu Gly Phe Phe Gly Ser Ile Phe Gly Leu Met Gly Val Tyr Ile
               215                 220                 225
Tyr Asp Gly Glu Leu Val Ser Lys Asn Gly Phe Phe Gln Gly Tyr
               230                 235                 240
Asn Arg Leu Thr Trp Ile Val Val Val Leu Gln Ala Leu Gly Gly
               245                 250                 255
Leu Val Ile Ala Ala Val Ile Lys Tyr Ala Asp Asn Ile Leu Lys
               260                 265                 270
Gly Phe Ala Thr Ser Leu Ser Ile Ile Leu Ser Thr Leu Ile Ser
               275                 280                 285
Tyr Phe Trp Leu Gln Asp Phe Val Pro Thr Ser Val Phe Phe Leu
               290                 295                 300
```

```
Gly Ala Ile Leu Val Ile Thr Ala Thr Phe Leu Tyr Gly Tyr Asp
                305                 310                 315
Pro Lys Pro Ala Gly Asn Pro Thr Lys Ala
                320                 325


<210> 9
<211> 178
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 2945431CD1

<400> 9
Met Ser Leu Ser Pro Arg Ser Gln Leu Ala Ile Ile Pro Gln Glu
  1               5                  10                  15
Pro Phe Leu Phe Ser Gly Thr Val Arg Glu Asn Leu Asp Pro Gln
                20                  25                  30
Gly Leu His Lys Asp Arg Ala Leu Trp Gln Ala Leu Lys Gln Cys
                35                  40                  45
His Leu Ser Glu Val Ile Thr Ser Met Gly Gly Leu Asp Gly Glu
                50                  55                  60
Leu Gly Glu Gly Gly Arg Ser Leu Ser Leu Gly Gln Arg Gln Leu
                65                  70                  75
Leu Cys Leu Ala Arg Ala Leu Leu Thr Asp Ala Lys Ile Leu Cys
                80                  85                  90
Ile Asp Glu Ala Thr Ala Ser Val Asp Gln Lys Thr Asp Gln Leu
                95                 100                 105
Leu Gln Gln Thr Ile Cys Lys Arg Phe Ala Asn Lys Thr Val Leu
               110                 115                 120
Thr Ile Ala His Arg Leu Asn Thr Ile Leu Asn Ser Asp Arg Val
               125                 130                 135
Leu Val Leu Gln Ala Gly Arg Val Val Glu Leu Asp Ser Pro Ala
               140                 145                 150
Thr Leu Arg Asn Gln Pro His Ser Leu Phe Gln Gln Leu Leu Gln
               155                 160                 165
Ser Ser Gln Gln Gly Val Pro Ala Ser Leu Gly Gly Pro
               170                 175


<210> 10
<211> 255
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 4074113CD1

<400> 10
Met Glu Arg Glu Met Glu Gly Arg Pro Leu His Asn Glu Gly Trp
  1               5                  10                  15
Ile Asp Arg Ser Arg Val Gln Gln Lys Asp Leu Pro Asn Lys Cys
```

```
                  20                  25                  30
Pro Gln Thr Leu Trp Ser Glu Gln Ala Phe Pro Pro Asn Pro Gly
                  35                  40                  45
Gln Val Gly Ile Val Gly Arg Thr Gly Ala Gly Lys Ser Ser Leu
                  50                  55                  60
Ala Ser Gly Leu Leu Arg Leu Pro Glu Ala Ala Glu Gly Gly Ile
                  65                  70                  75
Trp Ile Asp Gly Val Pro Ile Ala His Val Gly Leu His Thr Leu
                  80                  85                  90
Arg Ser Arg Ile Ser Ile Ile Pro Gln Asp Pro Ile Leu Phe Pro
                  95                 100                 105
Gly Ser Leu Arg Met Asn Leu Asp Leu Leu Gln Glu His Ser Asp
                 110                 115                 120
Glu Ala Ile Trp Ala Ala Leu Glu Thr Val Gln Leu Lys Ala Leu
                 125                 130                 135
Val Ala Ser Leu Pro Gly Gln Leu Gln Tyr Lys Cys Ala Asp Arg
                 140                 145                 150
Gly Glu Asp Leu Ser Val Gly Gln Lys Gln Leu Leu Cys Leu Ala
                 155                 160                 165
Arg Ala Leu Leu Arg Lys Thr Gln Ile Leu Ile Leu Asp Glu Ala
                 170                 175                 180
Thr Ala Ala Val Asp Pro Gly Thr Glu Leu Gln Met Gln Ala Met
                 185                 190                 195
Leu Gly Ser Trp Phe Ala Gln Cys Thr Val Leu Leu Ile Ala His
                 200                 205                 210
Arg Leu Arg Ser Val Met Asp Cys Ala Arg Val Leu Val Met Asp
                 215                 220                 225
Lys Gly Gln Val Ala Glu Ser Gly Ser Pro Ala Gln Leu Leu Ala
                 230                 235                 240
Gln Lys Gly Leu Phe Tyr Arg Leu Ala Gln Glu Ser Gly Leu Val
                 245                 250                 255
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<210> 11
<211> 462
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 1413743CD1

<400> 11

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Met Ala Gln Val Ser Ile Asn Asn Asp Tyr Ser Glu Trp Asp Leu
  1               5                  10                  15
Ser Thr Asp Ala Gly Glu Arg Ala Arg Leu Leu Gln Ser Pro Cys
                 20                  25                  30
Val Asp Thr Ala Pro Lys Ser Glu Trp Glu Ala Ser Pro Gly Gly
                 35                  40                  45
Leu Asp Arg Gly Thr Thr Ser Thr Leu Gly Ala Ile Phe Ile Val
                 50                  55                  60
Val Asn Ala Cys Leu Gly Ala Gly Leu Leu Asn Phe Pro Ala Ala
                 65                  70                  75
Phe Ser Thr Ala Gly Gly Val Ala Ala Gly Ile Ala Leu Gln Met
                 80                  85                  90
```

```
Gly Met Leu Val Phe Ile Ile Ser Gly Leu Val Ile Leu Ala Tyr
                 95                  100                 105
Cys Ser Gln Ala Ser Asn Glu Arg Thr Tyr Gln Glu Val Val Trp
                110                 115                 120
Ala Val Cys Gly Lys Leu Thr Gly Val Leu Cys Glu Val Ala Ile
                125                 130                 135
Ala Val Tyr Thr Phe Gly Thr Cys Ile Ala Phe Leu Ile Ile Ile
                140                 145                 150
Gly Asp Gln Gln Asp Lys Ile Ile Ala Val Met Ala Lys Glu Pro
                155                 160                 165
Glu Gly Ala Ser Gly Pro Trp Tyr Thr Asp Arg Lys Phe Thr Ile
                170                 175                 180
Ser Leu Thr Ala Phe Leu Phe Ile Leu Pro Leu Ser Ile Pro Arg
                185                 190                 195
Glu Ile Gly Phe Gln Lys Tyr Ala Ser Phe Leu Ser Val Val Gly
                200                 205                 210
Thr Trp Tyr Val Thr Ala Ile Val Ile Ile Lys Tyr Ile Trp Pro
                215                 220                 225
Asp Lys Glu Met Thr Pro Gly Asn Ile Leu Thr Arg Pro Ala Ser
                230                 235                 240
Trp Met Ala Val Phe Asn Ala Met Pro Thr Ile Cys Phe Gly Phe
                245                 250                 255
Gln Cys His Val Ser Ser Val Pro Val Phe Asn Ser Met Gln Gln
                260                 265                 270
Pro Glu Val Lys Thr Trp Gly Gly Val Val Thr Ala Ala Met Val
                275                 280                 285
Ile Ala Leu Ala Val Tyr Met Gly Thr Gly Ile Cys Gly Phe Leu
                290                 295                 300
Thr Phe Gly Ala Ala Val Asp Pro Asp Val Leu Leu Ser Tyr Pro
                305                 310                 315
Ser Glu Asp Met Ala Val Ala Val Ala Arg Ala Phe Ile Ile Leu
                320                 325                 330
Ser Val Leu Thr Ser Tyr Pro Ile Leu His Phe Cys Gly Arg Ala
                335                 340                 345
Val Val Glu Gly Leu Trp Leu Arg Tyr Gln Gly Val Pro Val Glu
                350                 355                 360
Glu Asp Val Gly Arg Glu Arg Arg Arg Arg Val Leu Gln Thr Leu
                365                 370                 375
Val Trp Phe Leu Leu Thr Leu Leu Leu Ala Leu Phe Ile Pro Asp
                380                 385                 390
Ile Gly Lys Val Ile Ser Val Ile Gly Gly Leu Ala Ala Cys Phe
                395                 400                 405
Ile Phe Val Phe Pro Gly Leu Cys Leu Ile Gln Ala Lys Leu Ser
                410                 415                 420
Glu Met Glu Glu Val Lys Pro Ala Ser Trp Trp Val Leu Val Ser
                425                 430                 435
Tyr Gly Val Leu Leu Val Thr Leu Gly Ala Phe Ile Phe Gly Gln
                440                 445                 450
Thr Thr Ala Asn Ala Ile Phe Val Asp Leu Leu Ala
                455                 460
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<210> 12
<211> 758
<212> PRT

<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 1733477CD1

<400> 12

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Met Gly Leu Ala Asp Ala Ser Gly Pro Arg Asp Thr Gln Ala Leu
  1               5                  10                  15
Leu Ser Ala Thr Gln Ala Met Asp Leu Arg Arg Arg Asp Tyr His
             20                  25                  30
Met Glu Arg Pro Leu Leu Asn Gln Glu His Leu Glu Glu Leu Gly
             35                  40                  45
Arg Trp Gly Ser Ala Pro Arg Thr His Gln Trp Arg Thr Trp Leu
             50                  55                  60
Gln Cys Ser Arg Ala Arg Ala Tyr Ala Leu Leu Leu Gln His Leu
             65                  70                  75
Pro Val Leu Val Trp Leu Pro Arg Tyr Pro Val Arg Asp Trp Leu
             80                  85                  90
Leu Gly Asp Leu Leu Ser Gly Leu Ser Val Ala Ile Met Gln Leu
             95                 100                 105
Pro Gln Gly Leu Ala Tyr Ala Leu Leu Ala Gly Leu Pro Pro Val
            110                 115                 120
Phe Gly Leu Tyr Ser Ser Phe Tyr Pro Val Phe Ile Tyr Phe Leu
            125                 130                 135
Phe Gly Thr Ser Arg His Ile Ser Val Gly Thr Phe Ala Val Met
            140                 145                 150
Ser Val Met Val Gly Gly Val Thr Glu Ser Leu Ala Pro Gln Ala
            155                 160                 165
Leu Asn Asp Ser Met Ile Asn Glu Thr Ala Arg Asp Ala Ala Arg
            170                 175                 180
Val Gln Val Ala Ser Thr Leu Ser Val Leu Val Gly Leu Phe Gln
            185                 190                 195
Val Gly Leu Gly Leu Ile His Phe Gly Phe Val Val Thr Tyr Leu
            200                 205                 210
Ser Glu Pro Leu Val Arg Gly Tyr Thr Thr Ala Ala Ala Val Gln
            215                 220                 225
Val Phe Val Ser Gln Leu Lys Tyr Val Phe Gly Leu His Leu Ser
            230                 235                 240
Ser His Ser Gly Pro Leu Ser Leu Ile Tyr Thr Val Leu Glu Val
            245                 250                 255
Cys Trp Lys Leu Pro Gln Ser Lys Val Gly Thr Val Val Thr Ala
            260                 265                 270
Ala Val Ala Gly Val Val Leu Val Val Val Lys Leu Leu Asn Asp
            275                 280                 285
Lys Leu Gln Gln Gln Leu Pro Met Pro Ile Pro Gly Glu Leu Leu
            290                 295                 300
Thr Leu Ile Gly Ala Thr Gly Ile Ser Tyr Gly Met Gly Leu Lys
            305                 310                 315
His Arg Phe Glu Val Asp Val Val Gly Asn Ile Pro Ala Gly Leu
            320                 325                 330
Val Pro Pro Val Ala Pro Asn Thr Gln Leu Phe Ser Lys Leu Val
            335                 340                 345
Gly Ser Ala Phe Thr Ile Ala Val Val Gly Phe Ala Ile Ala Ile
            350                 355                 360
```

```
Ser Leu Gly Lys Ile Phe Ala Leu Arg His Gly Tyr Arg Val Asp
                365                 370                 375
Ser Asn Gln Glu Leu Val Ala Leu Gly Leu Ser Asn Leu Ile Gly
                380                 385                 390
Gly Ile Phe Gln Cys Phe Pro Val Ser Cys Ser Met Ser Arg Ser
                395                 400                 405
Leu Val Gln Glu Ser Thr Gly Gly Asn Ser Gln Val Ala Gly Ala
                410                 415                 420
Ile Ser Ser Leu Phe Ile Leu Leu Ile Ile Val Lys Leu Gly Glu
                425                 430                 435
Leu Phe His Asp Leu Pro Lys Ala Val Leu Ala Ala Ile Ile Ile
                440                 445                 450
Val Asn Leu Lys Gly Met Leu Arg Gln Leu Ser Asp Met Arg Ser
                455                 460                 465
Leu Trp Lys Ala Asn Arg Ala Asp Leu Leu Ile Trp Leu Val Thr
                470                 475                 480
Phe Thr Ala Thr Ile Leu Leu Asn Leu Asp Leu Gly Leu Val Val
                485                 490                 495
Ala Val Ile Phe Ser Leu Leu Leu Val Val Val Arg Thr Gln Met
                500                 505                 510
Pro His Tyr Ser Val Leu Gly Gln Val Pro Asp Thr Asp Ile Tyr
                515                 520                 525
Arg Asp Val Ala Glu Tyr Ser Glu Ala Lys Glu Val Arg Gly Val
                530                 535                 540
Lys Val Phe Arg Ser Ser Ala Thr Val Tyr Phe Ala Asn Ala Glu
                545                 550                 555
Phe Tyr Ser Asp Ala Leu Lys Gln Arg Cys Gly Val Asp Val Asp
                560                 565                 570
Phe Leu Ile Ser Gln Lys Lys Lys Leu Leu Lys Lys Gln Glu Gln
                575                 580                 585
Leu Lys Leu Lys Gln Leu Gln Lys Glu Glu Lys Leu Arg Lys Gln
                590                 595                 600
Ala Ala Ser Pro Lys Gly Ala Ser Val Ser Ile Asn Val Asn Thr
                605                 610                 615
Ser Leu Glu Asp Met Arg Ser Asn Asn Val Glu Asp Cys Lys Met
                620                 625                 630
Met Val Ser Ser Gly Asp Lys Met Glu Asp Ala Thr Ala Asn Gly
                635                 640                 645
Gln Glu Asp Ser Lys Ala Pro Asp Gly Ser Thr Leu Lys Ala Leu
                650                 655                 660
Gly Leu Pro Gln Pro Asp Phe His Ser Leu Ile Leu Asp Leu Gly
                665                 670                 675
Ala Leu Ser Phe Val Asp Thr Val Cys Leu Lys Ser Leu Lys Asn
                680                 685                 690
Ile Phe His Asp Phe Arg Glu Ile Glu Val Glu Val Tyr Met Ala
                695                 700                 705
Ala Cys His Ser Pro Val Val Ser Gln Leu Glu Ala Gly His Phe
                710                 715                 720
Phe Asp Ala Ser Ile Thr Lys Lys His Leu Phe Ala Ser Val His
                725                 730                 735
Asp Ala Val Thr Phe Ala Leu Gln His Pro Arg Pro Val Pro Asp
                740                 745                 750
Ser Pro Val Ser Val Thr Arg Leu
                755
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<210> 13
<211> 336
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 2641908CD1

<400> 13
Met Met Gly Pro Gly Leu Ala Phe Gly Leu Gly Ser Leu Met Leu
1 5 10 15
Arg Leu Tyr Val Asp Ile Asn Gln Met Pro Glu Gly Gly Ile Ser
20 25 30
Leu Thr Ile Lys Asp Pro Arg Trp Val Gly Ala Trp Trp Leu Gly
35 40 45
Phe Leu Ile Ala Ala Gly Ala Val Ala Leu Ala Ala Ile Pro Tyr
50 55 60
Phe Phe Phe Pro Lys Glu Met Pro Lys Glu Lys Arg Glu Leu Gln
65 70 75
Phe Arg Arg Lys Val Leu Ala Val Thr Asp Ser Pro Ala Arg Lys
80 85 90
Gly Lys Asp Ser Pro Ser Lys Gln Ser Pro Gly Glu Ser Thr Lys
95 100 105
Lys Gln Asp Gly Leu Val Gln Ile Ala Pro Asn Leu Thr Val Ile
110 115 120
Gln Phe Ile Lys Val Phe Pro Arg Val Leu Leu Gln Thr Leu Arg
125 130 135
His Pro Ile Phe Leu Leu Val Val Leu Ser Gln Val Cys Leu Ser
140 145 150
Ser Met Ala Ala Gly Met Ala Thr Phe Leu Pro Lys Phe Leu Glu
155 160 165
Arg Gln Phe Ser Ile Thr Ala Ser Tyr Ala Asn Leu Leu Ile Gly
170 175 180
Cys Leu Ser Phe Pro Ser Val Ile Val Gly Ile Val Val Gly Gly
185 190 195
Val Leu Val Lys Arg Leu His Leu Gly Pro Val Gly Cys Gly Ala
200 205 210
Leu Cys Leu Leu Gly Met Leu Leu Cys Leu Phe Phe Ser Leu Pro
215 220 225
Leu Phe Phe Ile Gly Cys Ser Ser His Gln Ile Ala Gly Ile Thr
230 235 240
His Gln Thr Ser Ala His Pro Gly Leu Glu Leu Ser Pro Ser Cys
245 250 255
Met Glu Ala Cys Ser Cys Pro Leu Asp Gly Phe Asn Pro Val Cys
260 265 270
Asp Pro Ser Thr Arg Val Glu Tyr Ile Thr Pro Cys His Ala Gly
275 280 285
Cys Ser Ser Trp Val Val Gln Asp Ala Leu Asp Asn Ser Gln Ser
290 295 300
Pro Pro Thr Ser His Pro His Ala Gly His Gln His Leu Asn Leu
305 310 315
Arg Leu Leu Gln Gly Glu Thr Trp Ala Ala Leu Ala Gly Ala Glu
320 325 330
Glu Pro Val Asp Gly Ala

335

<210> 14
<211> 103
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 2656554CD1

<400> 14
Met Glu Arg Gln Ser Arg Val Met Ser Glu Lys Asp Glu Tyr Gln
1 5 10 15
Phe Gln His Gln Gly Ala Val Glu Leu Leu Val Phe Asn Phe Leu
20 25 30
Leu Ile Leu Thr Ile Leu Thr Ile Trp Leu Phe Lys Asn His Arg
35 40 45
Phe Arg Phe Leu His Glu Thr Gly Gly Ala Met Val Tyr Asp Lys
50 55 60
Pro Pro Lys Phe Ala Met Ser Arg Glu Gln Met Ser Gln Ser Cys
65 70 75
Ser His Thr Ala His Asn Ala Ser Leu Leu Thr Asp Ala Gly Pro
80 85 90
Leu Ser Cys Gly Glu Ser Arg Ala Ser Cys Leu Phe Leu
95 100

<210> 15
<211> 123
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 2719228CD1

<400> 15
Met Gln Gly Met Gly Leu Gly Leu Ser Ser Val Phe Ala Leu Cys
1 5 10 15
Leu Gly His Thr Ser Ser Phe Cys Glu Ser Val Val Phe Ala Ser
20 25 30
Ala Ser Ile Gly Leu Gln Thr Phe Asn His Ser Gly Ile Ser Val
35 40 45
Asn Ile Gln Asp Leu Ala Pro Ser Cys Ala Gly Phe Leu Phe Gly
50 55 60
Val Ala Asn Thr Ala Gly Ala Leu Ala Gly Val Val Gly Val Cys
65 70 75
Leu Gly Gly Tyr Leu Met Glu Thr Thr Gly Ser Trp Thr Cys Leu
80 85 90
Phe Asn Leu Val Ala Ile Ile Ser Asn Leu Gly Leu Cys Thr Phe
95 100 105
Leu Val Phe Gly Gln Ala Gln Arg Val Asp Leu Ser Ser Thr His
110 115 120

Glu Asp Leu

<210> 16
<211> 222
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 3657824CD1

<400> 16
Met Lys Gln Glu Ser Ala Ala Pro Asn Thr Pro Pro Thr Ser Gln
1 5 10 15
Ser Pro Thr Pro Ser Ala Gln Phe Pro Arg Asn Asp Gly Asp Pro
20 25 30
Gln Ala Leu Trp Ile Phe Gly Tyr Gly Ser Leu Val Trp Arg Pro
35 40 45
Asp Phe Ala Tyr Ser Asp Ser Arg Val Gly Phe Val Arg Gly Tyr
50 55 60
Ser Arg Arg Phe Trp Gln Gly Asp Thr Phe His Arg Gly Ser Asp
65 70 75
Lys Met Pro Gly Arg Val Val Thr Leu Leu Glu Asp His Glu Gly
80 85 90
Cys Thr Trp Gly Val Ala Tyr Gln Val Gln Gly Glu Gln Val Ser
95 100 105
Lys Ala Leu Lys Tyr Leu Asn Val Arg Glu Ala Val Leu Gly Gly
110 115 120
Tyr Asp Thr Lys Glu Val Thr Phe Tyr Pro Gln Asp Ala Pro Asp
125 130 135
Gln Pro Leu Lys Ala Leu Ala Tyr Val Ala Thr Pro Gln Asn Pro
140 145 150
Gly Tyr Leu Gly Pro Ala Pro Glu Glu Ala Ile Ala Thr Gln Ile
155 160 165
Leu Ala Cys Arg Gly Phe Ser Gly His Asn Leu Glu Tyr Leu Leu
170 175 180
Arg Leu Ala Asp Phe Met Gln Leu Cys Gly Pro Gln Ala Gln Asp
185 190 195
Glu His Leu Ala Ala Ile Val Asp Ala Val Gly Thr Met Leu Pro
200 205 210
Cys Phe Cys Pro Thr Glu Gln Ala Leu Ala Leu Val
215 220

<210> 17
<211> 111
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 5378485CD1

<400> 17
Met Leu Ser Ala Leu Pro Gly Trp Gly Pro Ala His Leu Gln Arg

```
  1               5                  10                  15
Pro Leu Leu Gly Pro Ala Ser Cys Leu Gly Ile Leu Arg Pro Ala
                20                  25                  30
Met Thr Ala His Ser Phe Ala Leu Pro Val Ile Ile Phe Thr Thr
                35                  40                  45
Phe Trp Gly Leu Val Gly Ile Ala Gly Pro Trp Phe Val Pro Lys
                50                  55                  60
Gly Pro Asn Arg Gly Val Ile Ile Thr Met Leu Val Ala Thr Ala
                65                  70                  75
Val Cys Cys Tyr Leu Phe Trp Leu Ile Ala Ile Leu Ala Gln Leu
                80                  85                  90
Asn Pro Leu Phe Gly Pro Gln Leu Lys Asn Glu Thr Ile Trp Tyr
                95                 100                 105
Val Arg Phe Leu Trp Glu
               110
```

<210> 18
<211> 1303
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 961344CB1

<400> 18

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cccacgcgtc cgcccacgcg tccgcaagat atggatgcta acaggcgata aactcgagac  60
agctacctgc attgccaaaa gttcacatct cgtgtctaga acacaagata ttcatatttt 120
cagacaggta accagtcggg gagaggcaca tttggagctg aatgcatttc gaaggaagca 180
tgattgtgca ctagtcatat ctggggactc tctggaggtt tgtctaaagt actacgagca 240
tgaatttgtg gagctggcct gccagtgccc tgccgtggtt tgctgccgct gctcacccac 300
ccagaaggcc cgcattgtga cactgctgca gcagcacaca gggagacgca cctgcgccat 360
cggtgatgga ggaaatgatg tcagcatgat tcaggcagca gactgtggga ttgggattga 420
gggaaaggag ggtaaacagg cctcgctggc ggccgacttc tccatcacgc agttccggca 480
cataggcagg ctgctcatgg tgcacgggcg gaacagctac aagaggtcgg cggcactcgg 540
ccagttcgtc atgcacaggg gccttatcat ctccaccatg caggctgtgt tttcctcagt 600
cttctacttc gcatccgtcc ctttgtatca gggcttcctc atggtggggt atgccaccat 660
atacaccatg ttcccagtgt tctccttagt gctggaccag gacgtgaagc cagagatggc 720
gatgctctac ccggagctgt acaaggacct caccaaggga agatccttgt ccttcaaaac 780
cttcctcatc tgggttttaa taagtattta ccaaggcggc atcctcatgt atggggccct 840
ggtgctcttc gagtctgagt tcgtccacgt ggtggccatc tccttcaccg cactgatcct 900
gaccgagctg ctgatggtgg cgctgaccgt ccgcacgtgg cactggctga tggtggtggc 960
cgagttcctc agcttaggct gctacgtgtc ctcactcgct tttctcaatg aatattttgg 1020
tataggcaga gtgtcttttg gagctttctt agatgttgcc tttatcacca ccgtgacctt 1080
cctgtggaaa gtgtcggcga tcaccgtggt cagctgcctc ccgctgtatg tcctcaagta 1140
cctgaggcgc aagctctctc ctcccagcta ctgcaagctg gcctcctaag gggctgtgca 1200
cccccagcgg gctggcccca gcaccttctg cccttcccag caccttgtgc ccttgccagt 1260
gaacgcaggg tttgccattg ctaccaagca agcaccacaa gaa                   1303
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<210> 19
<211> 3395
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
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gctgcaccga tgaacattac gaagttctag aaaaaacatc acttcaaaat gcctggagta 540
attcctctta tatcaactaa tttcaagaag aaaacttgca gaaactaacc ccacccctct 600
taagagaata ttgtgtccaa gtccttttta tttatacgaa cagtgtctta ttttcttata 660
atgaaat 667

<210> 32
<211> 1635
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 2719228CB1

<400> 32
atagctgtct tgagccccaa gcctcttcct cccctgctgc ccctctgcag ccattcggga 60
tgggaccccc tctggggtgt cagcacgaaa gggctaacgg gagccccttc cttggcctcc 120

ccctgtaggt tacagagcca tcacggtgcg gaagctcatg cagggcatgg gccttggcct 180
ctccagcgtc tttgctctgt gcctgggcca cacctccagc ttctgtgagt ctgtggtctt 240
tgcatcagcc tccatcggcc tccagacctt caaccacagt ggcatttctg ttaacatcca 300
ggacttggcc ccgtcctgcg ccggctttct gtttggtgtg gccaacacag ccggggcctt 360
ggcaggtgtc gtgggtgtgt gtctaggcgg ctacttgatg gagaccacgg gctcctggac 420
ttgcctgttc aaccttgtgg ccatcatcag caacctgggg ctgtgcacct tcctggtgtt 480
tggacaggct cagagggtgg acctgagctc tacccatgag gacctctagc tcccaacccc 540
acagcctctc caaggaccca ggcgccagca gccccgggac acaggggact cagtgtgtga 600
gacttggtca ctccatgtca gacacacgag cagagaggaa cacaaaccac tgtggagcct 660
gaagctcctt aagaagagtc cacaacagct ggtgggaggg tggggtgggc ctgggtccag 720
accaggctcg ctgctctctg ggcctcagtt tccccacctg ccagcgggct cggccctgtc 780
ctcctcacag gctggtgtgg ccgtcagggt gggtggggtt attgttagta ggcgcagcct 840
cattcccacc acgatctgtt ccgcgtggtt cccgccaaac ctccctcggt cgccgtgttc 900
tccgcaagcc tcctgcagcg cccgcctgcc aatgtgaggc tggcaccagg ctgcagcctc 960
cccaatccca gcccactttg ctgtgtctct ggcgggctgt cctccttggt gggagctgtc 1020
ctgcacactg taggatgctt aaaggtatcc ctggcctcca cccaccccta gccagcagct 1080
cccagtcaga caacagccag aaatgtctcc agactctgcc cagcctcccc aggtagccac 1140
cctcgagaca cgacctcaga gtctctgtgt ctcctagaag cctgacagag acccccaggg 1200
cagtgggtgg gtggcgggct agagaccctt gcctgtgtcc gggaccctgg cgccgctctc 1260
ccctcctgtg gatccctccg cactaacagt gttctcagtg ggcagacgcc tgggcacccc 1320
ttgggccctg cccagcatgg ccatggcgca ggctctcgaa cccgcatggc tttcccaggc 1380
ctggtgattc tgctctccag ggacggttgg caccttcctc gggggcgggc cccacgcacc 1440
ccagaacaca cagacccacc tttctggcgt tctttctacc tccctttcg ttgcctgagg 1500
agctggtggt ttcatgagtt aatgatacat cttgcaaggt gtacacatag agaaaaaaac 1560
ctaaaaatgt ggaaaagcac gccaaagcct tatttaaata ataactatta aactattcaa 1620
aaagaaaaaa aaaaa 1635

<210> 33
<211> 1447
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 3657824CB1

<400> 33
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cagccccgga ggccgcctgg gcctatccct gtgccaggca ccatgaagca ggagtctgca 120
gccccgaaca ccccgcccac ctcgcagtcc cctacgccgt ccgctcagtt cccccgaaac 180
gacggcgacc ctcaagcgct gtggattttc gggtacggct ccctggtgtg gaggcccgac 240
ttcgcctaca gcgacagccg tgtgggcttc gtgcgcggct acagccgccg tttctggcag 300
ggagacacct tccatcgggg cagcgacaag atgcctggcc gtgtggtgac gctccttgaa 360
gatcatgagg gctgcacttg gggcgtggca taccaagtgc aaggggagca ggtaagcaag 420
gccctgaagt acctgaatgt gcgagaggca gtgcttggtg gctacgatac caaggaggtc 480
accttctatc cccaagatgc tcctgaccaa ccactgaagg cattggccta tgtggccacc 540
ccacagaacc ctggttacct gggccctgcg cctgaagagg ccattgccac gcagatcctg 600
gcctgccggg gcttctccgg ccacaacctt gaatacttgc tgcgtctggc agacttcatg 660
cagctctgtg ggcctcaggc gcaggacgag cacctggcag ccatcgtgga cgctgtgggc 720
accatgttgc cctgcttctg ccccaccgag caggctctgg cgctggtgtg aggggctgag 780
cccctgcggg gagtgctcat gtggacatca gggccagaca cccactccag tgcacaagac 840
agacttgcga ccgcttgagc ccactgagca gatatggtgg gtggctggag gcttctcttt 900
ctcagtccct gcctgtctgc cagcctgcag ctctcctgct tgacactgac ttactacttg 960
aaactttatt tattgcacca tgttggtgtg gtgggcaggt ggagggcctg ccctggacac 1020

aggggccctg ctgagcagtg gccccatcct ggaacttgac cagattcccc ccagtgctgc 1080
tgctaacccc acaccaccca ggcctccacc tccccaggga gtctccaaga gcctcgatcc 1140
tctgctcact cagcccagcc atccatagcc ctgggaattc cacctgccaa ggatcccagc 1200
aggctggatg agggatagta gggcatgagg agaaggagcc ctgtaaggac tgaggccccg 1260
gccagccctt ctcctccacc agttccccag agcagagctg gagctgatgc ctggacacag 1320
ctgctgagcc tggcctgggc ctcttaccca cttggttgtt ttcttgtccc tctgtctgtc 1380
tgtctatcta cttgtctgtc tgggccactc ctgcctgtgt gttggtctat tcctgggaag 1440
ctcatca 1447

<210> 34
<211> 657
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<223> Incyte ID No: 5378485CB1

<400> 34
gactcctgtt gcgcatgctc agcgcgctgc ccggctgggg acccgcgcac ctgcagcgcc 60
cgctgctcgg ccctgcatcc tgcctgggca tcctgcgccc ggccatgacg gcgcactcat 120
tcgccctccc ggtcatcatc ttcaccacgt tctggggcct cgtcggcatc gccgggccct 180
ggttcgtgcc gaagggaccc aaccgcggag tgatcatcac catgctggtc gccaccgccg 240
tctgctgtta cctcttctgg ctcatcgcca tcctggcgca gctgaacccc ctgttcgggc 300
cccagctgaa gaatgagacc atctggtacg tgcgcttcct gtgggagtga cccgccgccc 360
ccgacccagg tgcccagctc tcggaatgac tgtggctcca ctgtccctga caaccccttc 420
gtccggaccc tcccccacac aactatgtct ggtcaccagc tccctcctgc tggcacccag 480
agacccggac ccgcaggccc tgcctggttc ctggaagtct tcccagtctt cccagccagc 540
ccggggccct ggggagccct gggcacagca gcggccgagg ggatgtcctg ctccaatact 600
cgcactgctc tggagtttgc actctttcgc aaggagatgc tgctggggag ctggtat 657

<210> 35
<211> 646
<212> PRT
<213> Mus musculus

<300>
<308> GenBank ID No: g2612939

<400> 35
Met Arg Ala Pro Gly Ala Gly Thr Ala Ser Val Ala Ser Leu Ala
1 5 10 15
Leu Leu Trp Phe Leu Gly Leu Pro Trp Thr Trp Ser Ala Ala Ala
20 25 30
Ala Phe Cys Val Tyr Val Gly Gly Gly Gly Trp Arg Phe Leu Arg
35 40 45
Ile Val Cys Lys Thr Ala Arg Arg Asp Leu Phe Gly Leu Ser Val
50 55 60
Leu Ile Arg Val Arg Leu Glu Leu Arg Arg His Arg Arg Ala Gly
65 70 75
Asp Thr Ile Pro Cys Ile Phe Gln Ala Val Ala Arg Arg Gln Pro
80 85 90
Glu Arg Leu Ala Leu Val Asp Ala Ser Ser Gly Ile Cys Trp Thr
95 100 105

```
Phe Ala Gln Leu Asp Thr Tyr Ser Asn Ala Val Ala Asn Leu Phe
                110                 115                 120
Arg Gln Leu Gly Phe Ala Pro Gly Asp Val Val Ala Val Phe Leu
                125                 130                 135
Glu Gly Arg Pro Glu Phe Val Gly Leu Trp Leu Gly Leu Ala Lys
                140                 145                 150
Ala Gly Val Val Ala Ala Leu Leu Asn Val Asn Leu Arg Arg Glu
                155                 160                 165
Pro Leu Ala Phe Cys Leu Gly Thr Ser Ala Ala Lys Ala Leu Ile
                170                 175                 180
Tyr Gly Gly Glu Met Ala Ala Ala Val Ala Glu Val Ser Glu Gln
                185                 190                 195
Leu Gly Lys Ser Leu Leu Lys Phe Cys Ser Gly Asp Leu Gly Pro
                200                 205                 210
Glu Ser Ile Leu Pro Asp Thr Gln Leu Leu Asp Pro Met Leu Ala
                215                 220                 225
Glu Ala Pro Thr Thr Pro Leu Ala Gln Ala Pro Gly Lys Gly Met
                230                 235                 240
Asp Asp Arg Leu Phe Tyr Ile Tyr Thr Ser Gly Thr Thr Gly Leu
                245                 250                 255
Pro Lys Ala Ala Ile Val Val His Ser Arg Tyr Tyr Arg Ile Ala
                260                 265                 270
Ala Phe Gly His His Ser Tyr Ser Met Arg Ala Ala Asp Val Leu
                275                 280                 285
Tyr Asp Cys Leu Pro Leu Tyr His Ser Ala Gly Asn Ile Met Gly
                290                 295                 300
Val Gly Gln Cys Val Ile Tyr Gly Leu Thr Val Val Leu Arg Lys
                305                 310                 315
Lys Phe Ser Ala Ser Arg Phe Trp Asp Asp Cys Val Lys Tyr Asn
                320                 325                 330
Cys Thr Val Val Gln Tyr Ile Gly Glu Ile Cys Arg Tyr Leu Leu
                335                 340                 345
Arg Gln Pro Val Arg Asp Val Glu Gln Arg His Arg Val Arg Leu
                350                 355                 360
Ala Val Gly Asn Gly Leu Arg Pro Ala Ile Trp Glu Glu Phe Thr
                365                 370                 375
Gln Arg Phe Gly Val Pro Gln Ile Gly Glu Phe Tyr Gly Ala Thr
                380                 385                 390
Glu Cys Asn Cys Ser Ile Ala Asn Met Asp Gly Lys Val Gly Ser
                395                 400                 405
Cys Gly Phe Asn Ser Arg Ile Leu Thr His Val Tyr Pro Ile Arg
                410                 415                 420
Leu Val Lys Val Asn Glu Asp Thr Met Glu Pro Leu Arg Asp Ser
                425                 430                 435
Glu Gly Leu Cys Ile Pro Cys Gln Pro Gly Glu Pro Gly Leu Leu
                440                 445                 450
Val Gly Gln Ile Asn Gln Gln Asp Pro Leu Arg Arg Phe Asp Gly
                455                 460                 465
Tyr Val Ser Asp Ser Ala Thr Asn Lys Lys Ile Ala His Ser Val
                470                 475                 480
Phe Arg Lys Gly Asp Ser Ala Tyr Leu Ser Gly Asp Val Leu Val
                485                 490                 495
Met Asp Glu Leu Gly Tyr Met Tyr Phe Arg Asp Arg Ser Gly Asp
                500                 505                 510
Thr Phe Arg Trp Arg Gly Glu Asn Val Ser Thr Thr Glu Val Glu
```

```
                515                 520                 525
Ala Val Leu Ser Arg Leu Leu Gly Gln Thr Asp Val Ala Val Tyr
                530                 535                 540
Gly Val Ala Val Pro Gly Val Glu Gly Lys Ala Gly Met Ala Ala
                545                 550                 555
Ile Ala Asp Pro His Ser Gln Leu Asp Pro Asn Ser Met Tyr Gln
                560                 565                 570
Glu Leu Gln Lys Val Leu Ala Ser Tyr Ala Arg Pro Ile Phe Leu
                575                 580                 585
Arg Leu Leu Pro Gln Val Asp Thr Thr Gly Thr Phe Lys Ile Gln
                590                 595                 600
Lys Thr Arg Leu Gln Arg Glu Gly Phe Asp Pro Arg Gln Thr Ser
                605                 610                 615
Asp Arg Leu Phe Phe Leu Asp Leu Lys Gln Gly Arg Tyr Val Pro
                620                 625                 630
Leu Asp Glu Arg Val His Ala Arg Ile Cys Ala Gly Asp Phe Ser
                635                 640                 645
Leu
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<210> 36
<211> 691
<212> PRT
<213> Schistosoma mansoni

<300>
<308> GenBank ID No: g425474

<400> 36

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Met Phe Ser Ala Leu Cys Arg Arg Gly Phe Leu Thr Asn Lys Val
  1                 5                  10                  15
Ser Gln Phe Arg Ser Thr Tyr Lys Cys Asp His Tyr Asn Leu Lys
                 20                  25                  30
Thr His Ile Lys Pro Leu Lys Cys Ser Ser Ser Leu Arg Leu Thr
                 35                  40                  45
Val Gly Thr Gly Leu Phe Ile Ala Leu His Ser Lys Ile Ser Pro
                 50                  55                  60
Glu Ser Arg Ile Gln Thr Val Gln Cys Glu Val Asp Ser Tyr Gln
                 65                  70                  75
Thr Asp Gln Ile Thr Phe Ala Lys Ser Gly Gly Ile Pro Arg Tyr
                 80                  85                  90
Ile Gly Val Leu Ile Leu Pro Asp Cys Val Tyr Leu Phe Gly Ala
                 95                 100                 105
Ile Leu Gly Ala Phe Val Ala Ala Val Met Asn Val Tyr Ile Pro
                110                 115                 120
Leu Tyr Leu Gly Asp Phe Val Ser Ser Leu Ser Arg Cys Val Val
                125                 130                 135
Thr His Glu Gly Phe Val Ser Ala Val Tyr Val Pro Thr Leu Arg
                140                 145                 150
Leu Cys Ser Ser Tyr Leu Leu Gln Ser Leu Ser Thr Phe Leu Tyr
                155                 160                 165
Ile Gly Leu Leu Gly Ser Val Gly Glu Arg Met Ala Arg Arg Met
                170                 175                 180
Arg Ile Gln Leu Phe Arg Lys Leu Val Tyr Gln Asp Val Ala Tyr
                185                 190                 195
```

```
Phe Asp Val His Ser Ser Gly Lys Leu Val Glu Ile Ile Gly Ser
                200                 205                 210
Asp Val Gln Asn Phe Lys Ser Ser Phe Lys Gln Cys Ile Ser Gln
                215                 220                 225
Gly Leu Arg Asn Gly Ile Gln Val Val Gly Ser Val Phe Ala Leu
                230                 235                 240
Leu Ser Ile Ser Pro Thr Leu Thr Ala Ala Leu Ile Gly Cys Leu
                245                 250                 255
Pro Cys Val Phe Leu Ile Gly Ser Leu Met Gly Thr Glu Leu Arg
                260                 265                 270
His Ile Ser Arg Glu Val Gln Ser Gln Asn Ser Leu Phe Ala Ser
                275                 280                 285
Leu Ile Asp Glu Ala Phe Ser His Ile Arg Thr Val Lys Ser Leu
                290                 295                 300
Ala Met Glu Asp Phe Leu Ile Asn Lys Ile Asn Tyr Asn Val Asp
                305                 310                 315
Lys Ala Lys Met Leu Ser Glu Lys Leu Ser Phe Gly Ile Gly Ser
                320                 325                 330
Phe Gln Gly Leu Ser Asn Leu Thr Leu Asn Gly Val Val Leu Gly
                335                 340                 345
Val Leu Tyr Val Gly Gly His Leu Met Ser Arg Gly Glu Leu Asp
                350                 355                 360
Ala Gly His Leu Met Ser Phe Leu Ala Thr Thr Gln Thr Leu Gln
                365                 370                 375
Arg Ser Leu Thr Gln Leu Ser Leu Leu Tyr Gly Gln Val Val Arg
                380                 385                 390
Gly Tyr Thr Ala Leu Lys Arg Ile His Asp Ile Leu Ala Leu Pro
                395                 400                 405
Ser Gly Ile Gly Ser Ile Pro Ser Ser Ser Ser Ser Leu Val Val
                410                 415                 420
Ser Lys Gln His Val Asn Asn Ile Lys Glu Leu Pro Ser Ser Ser
                425                 430                 435
Ile Tyr Ser Ala Pro Ser Ile Glu Phe Ser Asp Val Lys Phe Ala
                440                 445                 450
Tyr Pro Asn Arg Pro Glu Thr Ile Val Leu Asn Glu Leu Ser Met
                455                 460                 465
Phe Leu Pro Gly Gly Lys Val Ile Ala Leu Val Gly Gln Ser Gly
                470                 475                 480
Ala Gly Lys Ser Thr Val Val Ser Leu Leu Glu Arg Phe Tyr Asp
                485                 490                 495
Pro Ile Ser Gly Glu Ile Leu Leu Asn Gly Asp Lys Leu Thr Asn
                500                 505                 510
Phe Asn Val Asn Tyr Leu Arg Ser Lys Leu Ile Gly Tyr Ile Ser
                515                 520                 525
Gln Glu Pro Gln Ile Phe Asn Ala Ser Ile Arg Glu Asn Ile Arg
                530                 535                 540
Phe Gly Arg Phe Asp Ala Thr Asp Glu Glu Val Glu Glu Ala Ala
                545                 550                 555
Lys Leu Ala Tyr Ala His Asp Phe Ile Ser Asn Asp Leu Pro Tyr
                560                 565                 570
Gly Tyr Asp Thr Leu Val Gly Gln Gly Thr Gly Thr Ile Ala Gly
                575                 580                 585
Leu Ser Gly Gly Gln Arg Gln Arg Ile Ala Ile Ala Arg Ile Leu
                590                 595                 600
Leu Lys Asn Ala Pro Ile Leu Leu Met Asp Glu Ala Thr Ser Ala
```

```
                605                 610                 615
Leu Asp Thr Glu Ser Glu Ala Lys Val Gln Asn Ala Leu Asn Asn
                620                 625                 630
Ala Met Lys Gly Arg Thr Val Leu Ile Ile Ala His Arg Leu Ser
                635                 640                 645
Thr Val Arg Lys Ala Asp Leu Ile Leu Val Met Ser Lys Gly Gln
                650                 655                 660
Ile Val Glu Lys Gly Thr His Ser Glu Leu Met Ala Asn His Gly
                665                 670                 675
Tyr Tyr Tyr Asn Leu Val Gln Arg Gln Glu Gly Cys Asp Val Phe
                680                 685                 690
Asp
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<210> 37
<211> 634
<212> PRT
<213> Rattus norvegicus

<300>
<308> GenBank ID No: g3015617

<400> 37

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Met Thr Val Ala Ser Thr Ala Ala Pro Ser Tyr Thr Thr Ser Asp
  1               5                  10                  15
Thr Asn Arg Val Ile Ser Thr Phe Ser Val Val Asp Tyr Val Val
                20                  25                  30
Phe Gly Leu Leu Leu Val Leu Ser Leu Val Ile Gly Leu Tyr His
                35                  40                  45
Ala Cys Arg Gly Trp Gly Arg His Thr Val Gly Glu Leu Leu Met
                50                  55                  60
Ala Asp Arg Lys Met Gly Cys Leu Pro Val Ala Leu Ser Leu Leu
                65                  70                  75
Ala Thr Phe Gln Ser Ala Val Ala Ile Leu Gly Gly Pro Ala Glu
                80                  85                  90
Ile Tyr Arg Phe Gly Thr Gln Tyr Trp Phe Leu Gly Cys Ser Tyr
                95                 100                 105
Phe Leu Gly Leu Leu Ile Pro Ala His Ile Phe Ile Pro Val Phe
                110                 115                 120
Tyr Arg Leu His Leu Thr Ser Ala Tyr Glu Tyr Leu Glu Leu Arg
                125                 130                 135
Phe Asn Lys Ala Val Arg Ile Cys Gly Thr Val Thr Phe Ile Phe
                140                 145                 150
Gln Met Val Val Tyr Met Gly Val Ala Leu Tyr Ala Pro Ser Leu
                155                 160                 165
Ala Leu Asn Ala Val Thr Gly Phe Asp Leu Trp Leu Ser Val Leu
                170                 175                 180
Ala Leu Gly Ile Val Cys Asn Ile Tyr Thr Ala Leu Gly Gly Leu
                185                 190                 195
Lys Ala Val Ile Trp Thr Asp Val Phe Gln Thr Leu Ile Met Phe
                200                 205                 210
Leu Gly Gln Leu Val Val Ile Ile Val Gly Ala Ala Lys Val Gly
                215                 220                 225
Gly Leu Gly His Val Trp Ala Val Ala Ser Gln His Gly Leu Ile
                230                 235                 240
```

```
Ser Gly Ile Glu Leu Asp Pro Asp Pro Phe Val Arg His Thr Phe
                245                 250                 255
Trp Thr Leu Ala Phe Gly Gly Val Phe Met Met Leu Ser Leu Tyr
                260                 265                 270
Gly Val Asn Gln Ala Gln Val Gln Arg Tyr Leu Ser Ser His Ser
                275                 280                 285
Glu Lys Ala Ala Val Leu Ser Cys Tyr Ala Val Phe Pro Cys Gln
                290                 295                 300
Gln Val Ala Leu Cys Met Ser Cys Leu Ile Gly Leu Val Met Phe
                305                 310                 315
Ala Tyr Tyr Lys Lys Tyr Ser Met Ser Pro Gln Gln Glu Gln Ala
                320                 325                 330
Ala Pro Asp Gln Leu Val Leu Tyr Phe Val Met Asp Leu Leu Lys
                335                 340                 345
Asp Met Pro Gly Leu Pro Gly Leu Phe Val Ala Cys Leu Phe Ser
                350                 355                 360
Gly Ser Leu Ser Thr Ile Ser Ser Ala Phe Asn Ser Leu Ala Thr
                365                 370                 375
Val Thr Met Glu Asp Leu Ile Gln Pro Trp Phe Pro Gln Leu Thr
                380                 385                 390
Glu Thr Arg Ala Ile Met Leu Ser Arg Ser Leu Ala Phe Ala Tyr
                395                 400                 405
Gly Leu Val Cys Leu Gly Met Ala Tyr Val Ser Ser His Leu Gly
                410                 415                 420
Ser Val Leu Gln Ala Ala Leu Ser Ile Phe Gly Met Val Gly Gly
                425                 430                 435
Pro Leu Leu Gly Leu Phe Cys Leu Gly Met Phe Phe Pro Cys Ala
                440                 445                 450
Asn Pro Leu Gly Ala Ile Val Gly Leu Leu Thr Gly Leu Thr Met
                455                 460                 465
Ala Phe Trp Ile Gly Ile Gly Ser Ile Val Ser Arg Met Ser Ser
                470                 475                 480
Ala Ala Ala Ser Pro Pro Leu Asn Gly Ser Ser Ser Phe Leu Pro
                485                 490                 495
Ser Asn Leu Thr Val Ala Thr Val Thr Thr Leu Met Pro Ser Thr
                500                 505                 510
Leu Ser Lys Pro Thr Gly Leu Gln Gln Phe Tyr Ser Leu Ser Tyr
                515                 520                 525
Leu Trp Tyr Ser Ala His Asn Ser Thr Thr Val Ile Ala Val Gly
                530                 535                 540
Leu Ile Val Ser Leu Leu Thr Gly Gly Met Arg Gly Arg Ser Leu
                545                 550                 555
Asn Pro Gly Thr Ile Tyr Pro Val Leu Pro Lys Leu Leu Ala Leu
                560                 565                 570
Leu Pro Leu Ser Cys Gln Lys Arg Leu Cys Trp Arg Ser His Asn
                575                 580                 585
Gln Asp Ile Pro Val Val Thr Asn Leu Phe Pro Glu Lys Met Gly
                590                 595                 600
Asn Gly Ala Leu Gln Asp Ser Arg Asp Lys Glu Arg Met Ala Glu
                605                 610                 615
Asp Gly Leu Val His Gln Pro Cys Ser Pro Thr Tyr Ile Val Gln
                620                 625                 630
Glu Thr Ser Leu
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<210> 38
<211> 507
<212> PRT
<213> Homo sapiens

<300>
<308> GenBank ID No: g3639058

<400> 38

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Met Ala Gly Ala Gly Pro Lys Arg Arg Ala Leu Ala Ala Pro Ala
  1               5                  10                  15
Ala Glu Glu Lys Glu Glu Ala Arg Glu Lys Met Leu Ala Ala Lys
                20                  25                  30
Ser Ala Asp Gly Ser Ala Pro Ala Gly Glu Gly Glu Gly Val Thr
                35                  40                  45
Leu Gln Arg Asn Ile Thr Leu Leu Asn Gly Val Ala Ile Ile Val
                50                  55                  60
Gly Thr Ile Ile Gly Ser Gly Ile Phe Val Thr Pro Thr Gly Val
                65                  70                  75
Leu Lys Glu Ala Gly Ser Pro Gly Leu Ala Leu Val Val Trp Ala
                80                  85                  90
Ala Cys Gly Val Phe Ser Ile Val Gly Ala Leu Cys Tyr Ala Glu
                95                 100                 105
Leu Gly Thr Thr Ile Ser Lys Ser Gly Gly Asp Tyr Ala Tyr Met
               110                 115                 120
Leu Glu Val Tyr Gly Ser Leu Pro Ala Phe Leu Lys Leu Trp Ile
               125                 130                 135
Glu Leu Leu Ile Ile Arg Pro Ser Ser Gln Tyr Ile Val Ala Leu
               140                 145                 150
Val Phe Ala Thr Tyr Leu Leu Lys Pro Leu Phe Pro Thr Cys Pro
               155                 160                 165
Val Pro Glu Glu Ala Ala Lys Leu Val Ala Cys Leu Cys Val Leu
               170                 175                 180
Leu Leu Thr Ala Val Asn Cys Tyr Ser Val Lys Ala Ala Thr Arg
               185                 190                 195
Val Gln Asp Ala Phe Ala Ala Ala Lys Leu Leu Ala Leu Ala Leu
               200                 205                 210
Ile Ile Leu Leu Gly Phe Val Gln Ile Gly Lys Gly Asp Val Ser
               215                 220                 225
Asn Leu Asp Pro Lys Phe Ser Phe Glu Gly Thr Lys Leu Asp Val
               230                 235                 240
Gly Asn Ile Val Leu Ala Leu Tyr Ser Gly Leu Phe Ala Tyr Gly
               245                 250                 255
Gly Trp Asn Tyr Leu Asn Phe Val Thr Glu Glu Met Ile Asn Pro
               260                 265                 270
Tyr Arg Asn Leu Pro Leu Ala Ile Ile Ile Ser Leu Pro Ile Val
               275                 280                 285
Thr Leu Val Tyr Val Leu Thr Asn Leu Ala Tyr Phe Thr Thr Leu
               290                 295                 300
Ser Thr Glu Gln Met Leu Ser Ser Glu Ala Val Ala Val Asp Phe
               305                 310                 315
Gly Asn Tyr His Leu Gly Val Met Ser Trp Ile Ile Pro Val Phe
               320                 325                 330
Val Gly Leu Ser Cys Phe Gly Ser Val Asn Gly Ser Leu Phe Thr
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                335                 340                 345
Ser Ser Arg Leu Phe Phe Val Gly Ser Arg Glu Gly His Leu Pro
                350                 355                 360
Ser Ile Leu Ser Met Ile His Pro Gln Leu Leu Thr Pro Val Pro
                365                 370                 375
Ser Leu Val Phe Thr Cys Val Met Thr Leu Leu Tyr Ala Phe Ser
                380                 385                 390
Lys Asp Ile Phe Ser Val Ile Asn Phe Phe Ser Phe Phe Asn Trp
                395                 400                 405
Leu Cys Val Ala Leu Ala Ile Ile Gly Met Ile Trp Leu Arg His
                410                 415                 420
Arg Lys Pro Glu Leu Glu Arg Pro Ile Lys Val Asn Leu Ala Leu
                425                 430                 435
Pro Val Phe Phe Ile Leu Ala Cys Leu Phe Leu Ile Ala Val Ser
                440                 445                 450
Phe Trp Lys Thr Pro Val Glu Cys Gly Ile Gly Phe Thr Ile Ile
                455                 460                 465
Leu Ser Gly Leu Pro Val Tyr Phe Phe Gly Val Trp Trp Lys Asn
                470                 475                 480
Lys Pro Lys Trp Leu Leu Gln Gly Ile Phe Ser Thr Thr Val Leu
                485                 490                 495
Cys Gln Lys Leu Met Gln Val Val Pro Gln Glu Thr
                500                 505
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<210> 39
<211> 504
<212> PRT
<213> Homo sapiens

<300>
<308> GenBank ID No: g1840045

<400> 39

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Met Glu Ala Pro Leu Gln Thr Glu Met Val Glu Leu Val Pro Asn
  1                 5                  10                  15
Gly Lys His Ser Glu Gly Leu Leu Pro Val Ile Thr Pro Met Ala
                 20                  25                  30
Gly Asn Gln Arg Val Glu Asp Pro Ala Arg Ser Cys Met Glu Gly
                 35                  40                  45
Lys Ser Phe Leu Gln Lys Ser Pro Ser Lys Glu Pro His Phe Thr
                 50                  55                  60
Asp Phe Glu Gly Lys Thr Ser Phe Gly Met Ser Val Phe Asn Leu
                 65                  70                  75
Ser Asn Ala Ile Met Gly Ser Gly Ile Leu Gly Leu Ala Tyr Ala
                 80                  85                  90
Met Ala Asn Thr Gly Ile Ile Leu Phe Leu Phe Leu Leu Thr Ala
                 95                 100                 105
Val Ala Leu Leu Ser Ser Tyr Ser Ile His Leu Leu Leu Lys Ser
                110                 115                 120
Ser Gly Val Val Gly Ile Arg Ala Tyr Glu Gln Leu Gly Tyr Arg
                125                 130                 135
Ala Phe Gly Thr Pro Gly Lys Leu Ala Ala Ala Leu Ala Ile Thr
                140                 145                 150
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Leu Gln Asn Ile Gly Ala Met Ser Ser Tyr Leu Tyr Ile Ile Lys
                155                 160                 165
Ser Glu Leu Pro Leu Val Ile Gln Thr Phe Leu Asn Leu Glu Glu
                170                 175                 180
Lys Thr Ser Asp Trp Tyr Met Asn Gly Asn Tyr Leu Val Ile Leu
                185                 190                 195
Val Ser Val Thr Ile Ile Leu Pro Leu Ala Leu Met Arg Gln Leu
                200                 205                 210
Gly Tyr Leu Gly Tyr Ser Ser Gly Phe Ser Leu Ser Cys Met Val
                215                 220                 225
Phe Phe Leu Ile Ala Val Ile Tyr Lys Lys Phe His Val Pro Cys
                230                 235                 240
Pro Leu Pro Pro Asn Phe Asn Asn Thr Thr Gly Asn Phe Ser His
                245                 250                 255
Val Glu Ile Val Lys Glu Lys Val Gln Leu Gln Val Glu Pro Glu
                260                 265                 270
Ala Ser Ala Phe Cys Thr Pro Ser Tyr Phe Thr Leu Asn Ser Gln
                275                 280                 285
Thr Ala Tyr Thr Ile Pro Ile Met Ala Phe Ala Phe Val Cys His
                290                 295                 300
Pro Glu Val Leu Pro Ile Tyr Thr Glu Leu Lys Asp Pro Ser Lys
                305                 310                 315
Lys Lys Met Gln His Ile Ser Asn Leu Ser Ile Ala Val Met Tyr
                320                 325                 330
Ile Met Tyr Phe Leu Ala Ala Leu Phe Gly Tyr Leu Thr Phe Tyr
                335                 340                 345
Asn Gly Val Glu Ser Glu Leu Leu His Thr Tyr Ser Lys Val Asp
                350                 355                 360
Pro Phe Asp Val Leu Ile Leu Cys Val Arg Val Ala Val Leu Thr
                365                 370                 375
Ala Val Thr Leu Thr Val Pro Ile Val Leu Phe Pro Val Arg Arg
                380                 385                 390
Ala Ile Gln Gln Met Leu Phe Pro Asn Gln Glu Phe Ser Trp Leu
                395                 400                 405
Arg His Val Leu Ile Ala Val Gly Leu Leu Thr Cys Ile Asn Leu
                410                 415                 420
Leu Val Ile Phe Ala Pro Asn Ile Leu Gly Ile Phe Gly Val Ile
                425                 430                 435
Gly Ala Thr Ser Ala Pro Phe Leu Ile Phe Ile Phe Pro Ala Ile
                440                 445                 450
Phe Tyr Phe Arg Ile Met Pro Thr Glu Lys Glu Pro Ala Arg Ser
                455                 460                 465
Thr Pro Lys Ile Leu Ala Leu Cys Phe Ala Met Leu Gly Phe Leu
                470                 475                 480
Leu Met Thr Met Ser Leu Ser Phe Ile Ile Ile Asp Trp Ala Ser
                485                 490                 495
Gly Thr Ser Arg His Gly Gly Asn His
                500
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<210> 40
<211> 393
<212> PRT
<213> Homo sapiens

<300>
<308> GenBank ID No: g1526438

<400> 40

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Met Ala Ala Val Gly Ala Gly Gly Ser Thr Ala Ala Pro Gly Pro
  1               5                  10                  15
Gly Ala Val Ser Ala Gly Ala Leu Glu Pro Gly Thr Ala Ser Ala
             20                  25                  30
Ala His Arg Arg Leu Lys Tyr Ile Ser Leu Ala Val Leu Val Val
             35                  40                  45
Gln Asn Ala Ser Leu Ile Leu Ser Ile Arg Tyr Ala Arg Thr Leu
             50                  55                  60
Pro Gly Asp Arg Phe Phe Ala Thr Thr Ala Val Val Met Ala Glu
             65                  70                  75
Val Leu Lys Gly Leu Thr Cys Leu Leu Leu Leu Phe Ala Gln Lys
             80                  85                  90
Arg Gly Asn Val Lys His Leu Val Leu Phe Leu His Glu Ala Val
             95                 100                 105
Leu Val Gln Tyr Val Asp Thr Leu Lys Leu Ala Val Pro Ser Leu
            110                 115                 120
Ile Tyr Thr Leu Gln Asn Asn Leu Gln Tyr Val Ala Ile Ser Asn
            125                 130                 135
Leu Pro Ala Ala Thr Phe Gln Val Thr Tyr Gln Leu Lys Ile Leu
            140                 145                 150
Thr Thr Ala Leu Phe Ser Val Leu Met Leu Asn Arg Ser Leu Ser
            155                 160                 165
Arg Leu Gln Trp Ala Ser Leu Leu Leu Leu Phe Thr Gly Val Ala
            170                 175                 180
Ile Val Gln Ala Gln Gln Ala Gly Gly Gly Gly Pro Arg Pro Leu
            185                 190                 195
Asp Gln Asn Pro Gly Ala Gly Leu Ala Ala Val Val Ala Ser Cys
            200                 205                 210
Leu Ser Ser Gly Phe Ala Gly Val Tyr Phe Glu Lys Ile Leu Lys
            215                 220                 225
Gly Ser Ser Gly Ser Val Trp Leu Arg Asn Leu Gln Leu Gly Leu
            230                 235                 240
Phe Gly Thr Ala Leu Gly Leu Val Gly Leu Trp Trp Ala Glu Gly
            245                 250                 255
Thr Ala Val Ala Thr Arg Gly Phe Phe Phe Gly Tyr Thr Pro Ala
            260                 265                 270
Val Trp Gly Val Val Leu Asn Gln Ala Phe Gly Gly Leu Leu Val
            275                 280                 285
Ala Val Val Val Lys Tyr Ala Asp Asn Ile Leu Lys Gly Phe Ala
            290                 295                 300
Thr Ser Leu Ser Ile Val Leu Ser Thr Val Ala Ser Ile Arg Leu
            305                 310                 315
Phe Gly Phe His Val Asp Pro Leu Phe Ala Leu Gly Ala Gly Leu
            320                 325                 330
Val Ile Gly Ala Val Tyr Leu Tyr Ser Leu Pro Arg Gly Ala Ala
            335                 340                 345
Lys Ala Ile Ala Ser Ala Ser Ala Ser Ala Ser Gly Pro Cys Val
            350                 355                 360
His Gln Gln Pro Pro Gly Gln Pro Pro Pro Pro Gln Leu Ser Ser
            365                 370                 375
His Arg Gly Asp Leu Ile Thr Glu Pro Phe Leu Pro Lys Ser Val
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380 385 390
Leu Val Lys

<210> 41
<211> 893
<212> PRT
<213> Homo sapiens

<300>
<308> GenBank ID No: g3335175

<400> 41
His Val Gln Asp Phe Thr Ala Phe Trp Asp Lys Ala Ser Glu Thr
1 5 10 15
Pro Thr Leu Gln Gly Leu Ser Phe Thr Val Arg Pro Gly Glu Leu
20 25 30
Leu Ala Val Val Gly Pro Val Gly Ala Gly Lys Ser Ser Leu Leu
35 40 45
Ser Ala Val Leu Gly Glu Leu Ala Pro Ser His Gly Leu Val Ser
50 55 60
Val His Gly Arg Ile Ala Tyr Val Ser Gln Gln Pro Trp Val Phe
65 70 75
Ser Gly Thr Leu Arg Ser Asn Ile Leu Phe Gly Lys Lys Tyr Glu
80 85 90
Lys Glu Arg Tyr Glu Lys Val Ile Lys Ala Cys Ala Leu Lys Lys
95 100 105
Asp Leu Gln Leu Leu Glu Asp Gly Asp Leu Thr Val Ile Gly Asp
110 115 120
Arg Gly Thr Thr Leu Ser Gly Gly Gln Lys Ala Arg Val Asn Leu
125 130 135
Ala Arg Ala Val Tyr Gln Asp Ala Asp Ile Tyr Leu Leu Asp Asp
140 145 150
Pro Leu Ser Ala Val Asp Ala Glu Val Ser Arg His Leu Phe Glu
155 160 165
Leu Cys Ile Cys Gln Ile Leu His Glu Lys Ile Thr Ile Leu Val
170 175 180
Thr His Gln Leu Gln Tyr Leu Lys Ala Ala Ser Gln Ile Leu Ile
185 190 195
Leu Lys Asp Gly Lys Met Val Gln Lys Gly Thr Tyr Thr Glu Phe
200 205 210
Leu Lys Ser Gly Ile Asp Phe Gly Ser Leu Leu Lys Lys Asp Asn
215 220 225
Glu Glu Ser Glu Gln Pro Pro Val Pro Gly Thr Pro Thr Leu Arg
230 235 240
Asn Arg Thr Phe Ser Glu Ser Ser Val Trp Ser Gln Gln Ser Ser
245 250 255
Arg Pro Ser Leu Lys Asp Gly Ala Leu Glu Ser Gln Asp Thr Glu
260 265 270
Asn Val Pro Val Thr Leu Ser Glu Glu Asn Arg Ser Glu Gly Lys
275 280 285
Val Gly Phe Gln Ala Tyr Lys Asn Tyr Phe Arg Ala Gly Ala His
290 295 300
Trp Ile Val Phe Ile Phe Leu Ile Leu Leu Asn Thr Ala Ala Gln

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                305                 310                 315
Val Ala Tyr Val Leu Gln Asp Trp Trp Leu Ser Tyr Trp Ala Asn
                320                 325                 330
Lys Gln Ser Met Leu Asn Val Thr Val Asn Gly Gly Gly Asn Val
                335                 340                 345
Thr Glu Lys Leu Asp Leu Asn Trp Tyr Leu Gly Ile Tyr Ser Gly
                350                 355                 360
Leu Thr Val Ala Thr Val Leu Phe Gly Ile Ala Arg Ser Leu Leu
                365                 370                 375
Val Phe Tyr Val Leu Val Asn Ser Ser Gln Thr Leu His Asn Lys
                380                 385                 390
Met Phe Glu Ser Ile Leu Lys Ala Pro Val Leu Phe Phe Asp Arg
                395                 400                 405
Asn Pro Ile Gly Arg Ile Leu Asn Arg Phe Ser Lys Asp Ile Gly
                410                 415                 420
His Leu Asp Asp Leu Leu Pro Leu Thr Phe Leu Asp Phe Ile Gln
                425                 430                 435
Thr Leu Leu Gln Val Val Gly Val Val Ser Val Ala Val Ala Val
                440                 445                 450
Ile Pro Trp Ile Ala Ile Pro Leu Val Pro Leu Gly Ile Ile Phe
                455                 460                 465
Ile Phe Leu Arg Arg Tyr Phe Leu Glu Thr Ser Arg Asp Val Lys
                470                 475                 480
Arg Leu Glu Ser Thr Thr Arg Ser Pro Val Phe Ser His Leu Ser
                485                 490                 495
Ser Ser Leu Gln Gly Leu Trp Thr Ile Arg Ala Tyr Lys Ala Glu
                500                 505                 510
Glu Arg Cys Gln Glu Leu Phe Asp Ala His Gln Asp Leu His Ser
                515                 520                 525
Glu Ala Trp Phe Leu Phe Leu Thr Thr Ser Arg Trp Phe Ala Val
                530                 535                 540
Arg Leu Asp Ala Ile Cys Ala Met Phe Val Ile Ile Val Ala Phe
                545                 550                 555
Gly Ser Leu Ile Leu Ala Lys Thr Leu Asp Ala Gly Gln Val Gly
                560                 565                 570
Leu Ala Leu Ser Tyr Ala Leu Thr Leu Met Gly Met Phe Gln Trp
                575                 580                 585
Cys Val Arg Gln Ser Ala Glu Val Glu Asn Met Met Ile Ser Val
                590                 595                 600
Glu Arg Val Ile Glu Tyr Thr Asp Leu Glu Lys Glu Ala Pro Trp
                605                 610                 615
Glu Tyr Gln Lys Arg Pro Pro Pro Ala Trp Pro His Glu Gly Val
                620                 625                 630
Ile Ile Phe Asp Asn Val Asn Phe Met Tyr Ser Pro Gly Gly Pro
                635                 640                 645
Leu Val Leu Lys His Leu Thr Ala Leu Ile Lys Ser Gln Glu Lys
                650                 655                 660
Val Gly Ile Val Gly Arg Thr Gly Ala Gly Lys Ser Ser Leu Ile
                665                 670                 675
Ser Ala Leu Phe Arg Leu Ser Glu Pro Glu Gly Lys Ile Trp Ile
                680                 685                 690
Asp Lys Ile Leu Thr Thr Glu Ile Gly Leu His Asp Leu Arg Lys
                695                 700                 705
Lys Met Ser Ile Ile Pro Gln Glu Pro Val Leu Phe Thr Gly Thr
                710                 715                 720
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Met Arg Lys Asn Leu Asp Pro Phe Lys Glu His Thr Asp Glu Glu
                725                 730                 735
Leu Trp Asn Ala Leu Gln Glu Val Gln Leu Lys Glu Thr Ile Glu
                740                 745                 750
Asp Leu Pro Gly Lys Met Asp Thr Glu Leu Ala Glu Ser Gly Ser
                755                 760                 765
Asn Phe Ser Val Gly Gln Arg Gln Leu Val Cys Leu Ala Arg Ala
                770                 775                 780
Ile Leu Arg Lys Asn Gln Ile Leu Ile Ile Asp Glu Ala Thr Ala
                785                 790                 795
Asn Val Asp Pro Arg Thr Asp Glu Leu Ile Gln Lys Lys Ile Arg
                800                 805                 810
Glu Lys Phe Ala His Cys Thr Val Leu Thr Ile Ala His Arg Leu
                815                 820                 825
Asn Thr Ile Ile Asp Ser Asp Lys Ile Met Val Leu Asp Ser Gly
                830                 835                 840
Arg Leu Lys Glu Tyr Asp Glu Pro Tyr Val Leu Leu Gln Asn Lys
                845                 850                 855
Glu Ser Leu Phe Tyr Lys Met Val Gln Gln Leu Gly Lys Ala Glu
                860                 865                 870
Ala Ala Ala Leu Thr Glu Thr Ala Lys Gln Val Ile Leu Gln Lys
                875                 880                 885
Lys Leu Ser Thr Tyr Trp Ser His
                890
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<210> 42
<211> 453
<212> PRT
<213> Homo sapiens

<300>
<308> GenBank ID No: g1279457

<400> 42

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Met Ala Leu Arg Gly Phe Cys Ser Arg Trp Leu Arg Pro Ala Leu
  1                 5                  10                  15
Ala Ile Gly Leu Phe Ala Ser Met Ala Ala Val Leu Leu Gly Gly
                 20                  25                  30
Ala Arg Ala Ser Arg Leu Leu Phe Gln Arg Leu Leu Trp Asp Val
                 35                  40                  45
Val Arg Ser Pro Ile Ser Phe Phe Glu Arg Thr Pro Ile Gly His
                 50                  55                  60
Leu Leu Asn Arg Phe Ser Lys Glu Thr Asp Thr Val Asp Val Asp
                 65                  70                  75
Ile Pro Asp Lys Leu Arg Ser Leu Leu Met Tyr Ala Phe Gly Leu
                 80                  85                  90
Leu Glu Val Ser Leu Val Val Glu Trp Pro Thr Pro Leu Pro Leu
                 95                 100                 105
Trp Pro Ser Cys His Cys Phe Ser Ser Thr Leu Gly Phe Arg Trp
                110                 115                 120
Leu Ala Ala Asn Val Glu Leu Leu Gly Asn Gly Leu Val Phe Ala
                125                 130                 135
Ala Ala Thr Cys Ala Val Leu Ser Lys Ala His Leu Ser Ala Gly
                140                 145                 150
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Leu Val Gly Phe Ser Val Ser Ala Ala Leu Gln Val Thr Gln Thr
                155                 160                 165
Leu Gln Trp Val Val Arg Asn Trp Thr Asp Leu Glu Asn Ser Ile
                170                 175                 180
Val Ser Val Glu Arg Met Gln Asp Tyr Ala Trp Thr Pro Lys Glu
                185                 190                 195
Ala Pro Trp Arg Leu Pro Thr Cys Ala Ala Gln Pro Pro Trp Pro
                200                 205                 210
Gln Gly Gly Gln Ile Glu Phe Arg Asp Phe Gly Leu Arg Tyr Arg
                215                 220                 225
Pro Glu Leu Pro Leu Ala Val Gln Gly Val Ser Phe Lys Ile His
                230                 235                 240
Ala Gly Glu Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly Lys
                245                 250                 255
Ser Ser Leu Ala Ser Gly Leu Leu Arg Leu Gln Glu Ala Ala Glu
                260                 265                 270
Gly Gly Ile Trp Ile Asp Gly Val Pro Ile Ala His Val Gly Val
                275                 280                 285
His Thr Leu Arg Ser Arg Ile Ser Ile Ile Pro Gln Asp Pro Ile
                290                 295                 300
Leu Phe Pro Gly Ser Leu Arg Met Asn Leu Asp Leu Leu Gln Glu
                305                 310                 315
His Ser Asp Glu Ala Ile Trp Ala Ala Leu Glu Thr Val Gln Leu
                320                 325                 330
Lys Ala Leu Val Ala Cys Leu Pro Gly Gln Leu Gln Tyr Lys Cys
                335                 340                 345
Ala Asp Arg Gly Glu Asp Leu Ser Val Gly Gln Lys Gln Leu Leu
                350                 355                 360
Cys Leu Ala Arg Ala Leu Leu Arg Lys Thr Gln Ile Leu Ile Leu
                365                 370                 375
Asp Glu Ala Thr Ala Ala Val Asp Pro Gly Thr Glu Leu Gln Met
                380                 385                 390
Gln Ala Met Leu Gly Ser Trp Phe Ala Gln Cys Thr Val Leu Leu
                395                 400                 405
Ile Ala His Arg Leu Arg Ser Val Met Asp Cys Ala Arg Val Leu
                410                 415                 420
Val Met Asp Lys Gly Gln Val Ala Glu Ser Gly Ser Pro Ala Gln
                425                 430                 435
Leu Leu Ala Gln Lys Gly Leu Phe Tyr Arg Leu Ala Gln Glu Ser
                440                 445                 450
Gly Leu Val
```